Enhance your AAAS membership with the Science Online advantage.

Science o



Full text Science—research papers and news articles with hyperlinks from citations to related abstracts in other journals before you receive Science in the mail.



ScienceNOW-succinct, daily briefings, of the hottest scientific, medical, and technological news.

Science's Next Wave-career advice, topical forums, discussion groups and expanded news written by today's brightest young scientists across the world.



Research Alerts sends you an email alert every time a Science research report comes out in the discipline, or by a specific author, citation or keyword of your choice.



Science's Professional Networklists hundreds of job openings and funding sources worldwide that are quickly and easily searchable by discipline, position, organization, and region.



new product information from the world's leading science manufacturers and suppliers all at a click of your mouse.



All the information you need... in one convenient location.

Visit Science Online at http://www.scienceonline.org, call 202-326-6417, or email membership2@aaas.org for more information.

AAAS is also proud to announce site-wide institutional subscriptions to Science Online. Contact your subscription agent or AAAS for details.



AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

• Human Integrins Beta 1, 3, 5

- Functional Extracellular Matrix
- Antibodies to Integrins, MMPs and TIMPs
- Integrin Purification Gels

Contact us for our complete product listing or for help with a novel reagent specific for your needs.

Visit www.chemicon.com • Phone: (909) 676-8080 • (800) 437-7500 Fax: (909) 676-9209 • E-Mail: custserv@chemicon.com

CHEMICON International, Ltd • (44) 181 8630 415 CHEMICON International, Germany • (49) 6192 2959 55

Circle No. 73 on Readers' Service Card

CHEMICON International, Inc.

Q: PEPTIDES? A: PEN LABS Q: GMP? A: PEN LABS

You've got questions? We've got answers.

As a leading supplier of synthetic peptides for over 25 years, we know what it takes to provide GMP products on time and on budget. And we know that when qualifying a cGMP manufacturing partner for your pharmaceutical-grade peptide, it's critical that you ask the right questions. We suggest you start with these:

- 1. Are the manufacturing facilities under strict environmental control, FDA- licensed and inspected?
- 2. Are cGMP procedures and processes validated?
- 3. Will your DMF (drug master file) be developed and maintained to FDA standards?
- 4. Will purity, identity, and integrity be evaluated by validated QC methods?
- 5. Are all cGMP personnel qualified, fully trained and cGMP certified?

At Peninsula Laboratories, the answer to each of these questions is an emphatic YES! Your peptide will be produced in full compliance with cGMP requirements. And our facilities stand up to the closest scrutiny.

So, bring all your cGMP questions to Peninsula Laboratories. We make it our business to provide you with answers.

Any questions? Contact Peninsula Laboratories today. We'll give you the answers along with a free copy of our comprehensive 100-page guide, *GMP Manufacturing of Synthetic Peptides*. Phone: (800) 922-1516, ext.174. Fax:(650) 595-4071. E-mail: GMP@penlabs.com.

Visit us on the Web at www.penlabs.com



Circle No. 74 on Readers' Service Card





INTEGRATED ANALYSIS TOOLS, GRAPHICAL INTERFACES AND DATABASES...FROM ONE SOURCE

It's about more than just surviving – it's about thriving. Look to Genetics Computer Group and Oxford Molecular Group to keep you equipped in bioinformatics.

Need analysis tools?	The GCG® Wisconsin Package™ offers the most comprehensive set of sequence analysis tools on the market.
Need flexibility?	Try the Wisconsin Package and SeqLab® on UNIX; SeqWeb® on the web; OMIGA on Windows 95/NT; or MacVector® on the Macintosh.
Need current data?	We provide the major nuclèotide, protein, and patent sequence databases available daily, weekly, or bimonthly.
Need speed?	Our database searching and sequence comparison programs run on multi-processor machines and cut your analysis time to a minimum.

QUALITY TOOLS.

BACKED BY SCIENTIFIC EXPERTISE AND A LEGACY OF COMMITMENT.



©Genetics Computer Group, 1999. GCG, GCG logo, and Wisconsin Package are trademarks of Genetics Computer Group. SeqWeb and SeqLab are registered trademarks of Genetics Computer Group. Oxford Molecular is a trademark of Oxford Molecular Ltd. MacVector is a registered trademark of Oxford Molecular. Circle No. 70 on Readers' Service Card

What's NXT In Microplate Analysis?

Look at this! ✓ Accuracy ✓ Ease of Use ✓ Versatility ✓ High Throughput



Introducing TopCount NXT

The new TopCount® NXT meets the increasing demands of microsample analysis with easy setup and data management, plus improved sensitivity and accuracy.

- New Windows[®] NT-based software with a built-in database breaks the information bottleneck.
- New High Efficiency Count Mode (HECM) and flotation assay methods handle your most difficult SPA and FlashPlate® assays.

For unprecedented speed, TopCount NXT measures up to 12 samples simultaneously and features a 40 plate capacity stacker. The result? TopCount NXT processes 50,000 samples per day with LucLiteTM, Packard's luminescence assay for reporter gene expression.

Over 500,000,000 Samples... And Counting!

Proven for over six years and in over 1,000 installations, TopCount processes scintillation and luminescence samples faster and more accurately than any other microplate system. Why?

- Only TopCount, with its unique temperature controlled counting chamber, actually delivers consistent results from sample to sample, assay to assay.
- Only TopCount, with its patented crosstalk-free measurement design, delivers high sensitivity for both scintillation assays and Packard's unique Constant-QuantaTM glow luminescence chemistries.

Contact Packard today for more information on the TopCount NXT! Circle No. 45 on Readers' Service Card



Packard Instrument Company

800 Research Parkway Meriden, CT 06450 U.S.A. Tel: 203-238-2351 Toll Free: 1-800-323-1891 FAX: 203-639-2172 Web Site: http://www.packardinst.com Email: webmaster@packardinst.com

Packard International Offices

Australia 03-9543-4266 or 1 800 335 638; Australia 03-9543-4266 or 1 800 335 638; Australia 03-1-2702504; Belgium 31(0)2/481.85.30; Canada 1-800-387-9559; Central Europe 43 456 2230 015; Denmark 45-43909023 or 45-43907151; France (33) 1 46.86.27.75; Germany (49) 6103 385-151; Italy 39-2-33910796/7/8; Japan 81-3-3866-5850; Netherlands 31-50-549 1296; Russia 7-095-259-9632; Switzerland (01) 481 69 44; United Kingdom 44 (0)118 9844981

INSTRUMENTATION, APPARATUS, AND LABORATORY MATERIALS

NEW PRODUCTS

DNA POLYMERASE

A new Taq polymerase, REDTaq, is easier to see and thus more convenient to use. The addition of REDTaq to a tube produces a thin red layer that is visible at the bottom. This color elimi-



nates the uncertainty that can occur with interruptions in pipetting. When the red color is uniform a solution is thoroughly mixed, which makes it easy to confirm proper mixing of samples. It requires no loading buffers because the post-polymerase chain reaction samples are dense enough to be loaded directly onto an agarose gel. The red dye works as a tracking dye, migrating just faster than bromphenol blue.

REMOVE DETERGENTS FROM PROTEIN SOLUTIONS

Detergent-OUT is a simple method for removing detergents from protein solutions

Geno Technology For more information call 314-645-2050 or circle 142 on the Reader Service Card

without significantly diluting the solutions. The user simply loads the protein solution on the Detergent-OUT spin column, spins it, and elutes a detergent-free solution. Two kits are offered, one for removal of

sodium dodecyl sulfate and one for removal of non-ionic detergents.

HIGH-SENSITIVITY PARTICLE SIZING

A new high-sensitivity particle sizing option is now available for the Zetasizer 1000 and 3000 dispersion technology systems, which are used for zeta potential and particle size measurement in a wide range of applications. This new fea-

ture will benefit analy sis of small and dilute samples as well as those that scatter light poorly because it confers up to a 20-fold increase in sensitivity in measuring the sample. It will also enable the systems to satisfy the

Malvern Instruments For more information call 508-480-0200 or circle 143 on the Reader Service Card

demanding particle-sizing requirements for life science applications involving DNA, surfactants, micelles, liposomes, and other drug delivery mechanisms. The systems have been engineered to produce an improved count rate equivalent



to using an external 20-mW 488-nm blue laser, but without the expense or technical problems.

AUTOMATED COLORIMETRY

Labtronics For more information call 519-767-1061 or circle 144 on the Reader Service Card

MagicChem 650 automates standard colorimetric analysis. The system consists of a robotic XYZ sampler, dilutor, peristaltic pump, spectrophotometer, and software. The system automatically measures out the correct sample

volume, adds reagents, transfers samples to the spectrophotometers, and runs regular standards and quality control samples. Offscale samples can be automatically diluted and re-run. The software provides advanced graphic capabilities, password protection, audit trail, extensive reporting functions, and comprehensive laboratory information management systems interfacing.

LIGAND-PROTEIN DOCKING SOFTWARE

Affinity is flexible software that automatically and accurately docks ligands to protein receptors. It allows the receptor binding site to relax during docking, then automatically finds the best binding modes of

Molecular Simulations For more information call 619-458-9990 or circle 145 on the Reader Service Card

the ligand to the receptor. This improved method incorporates a simulated annealing protocol for refinement of the bound ligand CONTINUED ON PAGE 350



a true arcuate cutting path (not just oscillating) for better sections • The largest bath accommodates the broadest range of tissue specimens The widest range of blade angles allows the cutting of any tissue

• The most extensive selection of

accessories gives maximum versatility



• Durable and reliable - yet easily, quickly and economically serviced if needed • Order it your way with either manual operation or with built-in automation



Circle No. 13 on Readers' Service Card

CONTINUED FROM PAGE 349 INSTRUMENTATION, APPARATUS, AND LABORATORY MATERIALS

SEPARATION

Miltenyi

Biotec

For more

information call

+49 2204 83060

or circle 147

on the Reader

Service Card

AUTOMATED MAGNETIC CELL

The autoMACS is a benchtop, computer-

controlled magnetic cell sorter designed for

use in cell separation in a variety of research

separation using high gradient magnetic

separation columns placed in a strong mag-

netic field. This gentle sorting results in fully

functional cells capable of further growth.

applications. It can be

used for the isolation of

virtually any cell type.

The instrument makes

use of the MACS tech-

nology, which is based

on specific cell labeling

with MACS magnetic mi-

crobeads, followed by a

and the ability to include or remove water molecules and specific hydrogen bonding patterns during the docking. The software is especially useful in structure-based drug design where the experimentally determined structure of a protein-ligand complex is often unavailable.

FIELD AND LAB DATA ACQUISITION RECORDER

The Dash 4u field and lab data recorder features a bright 10.4-inch color monitor, universal inputs, internal 4-Gb hard drive, 50kHz sample rate for data capture, uninterruptible power supply, and built-in 100-Mb

Astro-Med For more information call 800-343-4039 or circle 146 on the Reader Service Card

Zip drive for data transfer and archiving. The instrument's four isolated inputs eliminate the need for any external signal conditioning or additional front-end filtering. The instrument displays and records four

channels of real-time data, and includes two additional dedicated real-time math channels. The instrument is built into a rugged aluminum case and weighs only 22 pounds, so it can be carried to any test site.



Circle No. 40 on Readers' Service Card

30-day money-back guarantee

Reagent kits are available for a whole range of applications, such as T cell, B cell, NK cell, tumor cell, and stem cell sorting.

URETHANE CHAIR

The AdvantEdge urethane chair, designed for laboratory use, features durable urethane

upholstery that is easy to wash and resists damage from destructive liquids and chemicals. The upholstery also provides protection against punctures from sharp tools or other objects. The ergonomic design includes a waterfall front, shaped



circle 148 on the Reader Service Card

rear, foam padding, and a backrest that provides support for the lumbar region of the lower back.

LITERATURE

Laboratory Imaging and Analysis Systems is a 16-page color brochure on a full line of such systems, including the GDS-

UVP For more information call 800-452-6788 or circle 149 on the Reader Service Card

8000 personal computer-based system for application-specific solutions. Image acquisition and analysis software packages are included in the catalog. The catalog features the new HL-2000 HybriLinker

System, which combines a hybridization oven and 254-nm ultraviolet crosslinker in one space-saving unit.

1999 Product Catalog and Price List is a catalog of instruments for the growth and recovery of cells and their by-products.

New this year are a line of combinatorial chemistry shakers, as well as an expanded range of fermentation and cell culture products and accessories. Specifications for hundreds of biological shakers, rockers, rollers, fermentors,

New **Brunswick** Scientific For more information call 800-631-5417 or circle 150 on the Reader Service Card

bioreactors, continuous-flow centrifuges, sterilizers, plate pourers, and ancillary equipment are included.

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



The Award Committee Amersham Pharmacia Biotech & Science Prize for Young Scientists Enquiries from Europe - Science International, Bateman House, 82-88 Hills Road, Cambridge, CB2 1LQ, UK. Tel: +44 1223 326500, Fax: +44 1223 326501,-Enquiries from USA and all other regions - Science, 1200 New York Avenue, N Washington, DC 20005 USA. Tel: 202-326-6553, Fax. 202-789-8172.

York Avenue, NW,



Circle No. 53 on Readers' Service Card



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.





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
 Tel: 202-326-6722

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

ROBERT A. KEHOE ENDOWED PROFESSORSHIP

The Department of Environmental Health, College of Medicine, University of Cincinnati is seeking a distinguished academic scientist for our newly created Robert A. Kehoe Endowed Chair of Environmental Health. The Department of Environmental Health provides a collaborative environment of 42 faculty members, over \$17 million of extramural funding, and 80 full-time graduate students. The Department focuses on the role of occupational and environmental exposure, gene-environment interactions, and cellular and molecular mechanisms in the etiology of human diseases. Applicant should be an internationally recognized leader in environmental medicine, industrial hygiene, molecular and cellular toxicology, or epidemiology.

Please send curriculum vitae, including funding history, copies of recent publications, and the names, addresses, and telephone numbers of three references to: Roy E. Albert, M.D., Chair of the Search Committee, Box 670056, Cincinnati, OH 45267-0056. Email: roy.albert@uc.edu.

IMMUNOLOGY FACULTY POSITIONS

Three tenure-track faculty positions at the rank of ASSISTANT/ASSOCIATE PROFESSOR have been opened to allow expansion of a highly collaborative research group focused on the cellular and molecular biology of chronic inflammatory responses and interactive with other research groups focused on infection, transplantation, and cardiovascular and autoimmune diseases. Generous start-up funds, 12-month state-line salary, and a supportive environment are provided. Successful candidates will have, or be clearly able to establish, a productive extramurally funded research program and will bring strong teaching capability to our graduate and medical (or dental) education programs. The rank of Associate Professor will be considered for individuals who have an established research program and significant extramural research funds. Preference will be given to candidates capable of establishing collaborative research projects in one or more of the focus areas. Applicants must have two or more years of postdoctoral research experience with clear evidence of productivity and fundability. The search will remain open until the three positions are filled. To apply, submit a curriculum vitae containing an abstract of research interest and arrange for four letters of reference to be sent to: Robert D. Stout, Ph.D., Professor and Chairman, Department of Microbiology and Immunology, School of Medicine, University of Louisville, Health Sciences Center, Louisville, KY 40292. University of Louisville is an Equal Opportunity Employer.

FACULTY POSITION IN NEUROSCIENCES

Tenure-track ASSISTANT or ASSOCIATE PROFESSOR position, to begin fall 1999. Required: Ph.D., M.D., or equivalent with postdoctoral training. Preferences: candidates that are (1) capable of maintaining an independent research program in vertebrate neural development or one that complements existing department strengths and (2) trained to teach graduate and medical students in neuroscience, histology, and/or gross anatomy. Send curriculum vitae, research goals statement, and names of three references to: Faculty Search Committee, Department of Neurosciences, University of New Mexico School of Medicine, Albuquerque, NM 87131-5223. For best consideration, applica-tions should be received by June 1, 1999. Website: http://www.unm.edu/~neurohsc. Applicants must be eligible to work in the United States. UNM is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

DIRECTOR OF THE NATIONAL ADVANCED DRIVING SIMULATOR

The University of Iowa invites nominations and applications for the position of Director of the Na-tional Advanced Driving Simulator (NADS). The NADS is a state-of-the-art facility developed by the National Highway Traffic Safety Administration and the University of Iowa to conduct the world's most advanced driver-in-the-loop motor vehicle simulation research dedicated to highway safety and motor vehicle design. The Director provides leadership, vision, and management supervision to accomplish the NADS' mission; establishes and maintains the NADS' capabilities, and executes the NADS mission; ensures the NADS' primacy as a national asset and focal point for high-fidelity driving simulation research for government, university, and industry researchers; provides leadership to assure that the NADS is a fiscally self-supporting research facility over its lifetime, generating its own revenue for operation and long-term upgrades to ensure state-of-the-art performance; and establishes and maintains effective lines of communication with federal and state agencies, academic institutions, the private sector, private research organizations, and news media to ensure that the NADS is the national focal point for high-fidelity driving simulation research.

Qualified candidates should have an earned Ph.D. degree, or equivalent, in engineering, behavioral science, or other applied sciences related to simulation; demonstrated success with establishing, funding, managing, and maintaining a complex research program or facility; considerable experience in directing, conducting, or participating in research using highfidelity simulation with national or international visibility; and demonstrated communication skills and effective leadership in governmental, industrial, or university research organizations or associations.

Salary commensurate with experience. Screening will begin immediately; applications will be accepted until the position is filled. Send applications or nominations to:

National Advanced Driving Simulator Director Search Office of the Vice President for Research 201 Gilmore Hall The University of Iowa Iowa City, IA 52242

The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

FACULTY POSITION IN TUMOR AND TRANSPLANT IMMUNOLOGY

The Eppley Institute for Research in Cancer of the University of Nebraska Medical Center (UNMC) is seeking Ph.D. or M.D. applicants at all levels for a TENURE-TRACK POSITION in the general area of tumor or transplant immunology. The Eppley Institute is involved in a multidisciplinary effort focused on research in cancer and is part of the NCI-designated UNMC/Eppley Cancer Center. In addition to directing an independent research program, the successful applicant will be able to interact with clinical faculty that are nationally recognized for the use of transplantation to treat malignant, inherited, and autoimmune diseases. Opportunities exist to collaborate in nationally funded programs of basic and clinical research in immunotherapy and immunobiology. It is also anticipated that Eppley faculty be involved in the training of graduate students and Postdoctoral Fellows through Eppley's NCI-supported Cancer Research Training Program.

Applicants should send their résumé, names of three references, and a letter detailing their research goals to: Dr. Barry Gold, Interim Director, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, 986805 Nebraska Medical Center, Omaha, NE 68198-6805. The University of Nebraska Medical Center is an Equal Opportuuity/Affimative Action Employer.



The R.W. Johnson Pharmaceutical Research Institute (RWJPRI) conducts research and development in a variety of therapeutic areas for the Johnson & Johnson family of companies. Our Drug Discovery **La Jolla** site focuses on the application of state of the art techniques in cellular and molecular biology, bioinformatics, computer science and organic synthetic chemistry to discover novel approaches to unmet medical conditions. The key to our approach is utilizing the latest hardware and software information technology on genomic sequence data to sequence the expressed Human Genome.

The following positions are currently available:

Pharmacologists - Two positions available: We are looking for a leader in CNS/PNS with knowledge of neuroscience and molecular biology, and a leader in Immunology with knowledge of auto immunity and immunosuppression. Qualified individuals will build research teams that will identify novel targets, set up robust high through put assays, work with chemists on lead compounds, and interpret efficacy of test compounds in animal models. Both positions require a PhD. in pharmacology or related science, proven record of publications in a therapeutic area, and 5-7 years industry experience in drug discovery process. These qualified individuals must be computer literate, possess excellent communication skills, and have extensive knowledge of therapeutic targets in their field.

Microbiologist – This successful candidate will build a research team to identify novel microbacterial targets using bioinformatics & genetics as well as identify potential anti-microbial compounds using HTS assays. This position requires a PhD. in Microbiology, 3–5 years industry experience with a proven record of publications. This qualified candidate must be computer literate, have excellent communication skills, and possess knowledge in genome analysis, anti-microbial assays, bacterial genetics and bioinformatics.

Send your resume to: Human Resources, RWJPRI, 3535 General Atomics Court, San Diego, CA 92121. Fax: (619) 450-2008. E-mail: priljhr@prius.jnj.com. RWJPRI is an EOE.

Johnson Johnson



Glaxo Wellcome Inc., one of the world's leading pharmaceutical companies, is a community of people working together for a healthier world. Our breakthrough discoveries are helping people with HIV/AIDS, cancer, heart disease, asthma, migraines, epilepsy and many other diseases. Come share the challenge of leadership as we develop breakthrough medicines for everyday living. We invite you to be part of our Bioanalysis & Drug Metabolism Team in the following opening at our U.S. Corporate Headquarters in Research Triangle Park, NC.

RESEARCH INVESTIGATOR/ SR. RESEARCH INVESTIGATOR

We are seeking a Scientist to apply computational and experimental approaches to the discovery of new drugs with desirable physiochemical properties and disposition characteristics. The incumbent will work with a team representing various functions and disciplines, including drug disposition, pharmaceutics, medicinal chemistry, chemoinformatics and structural chemistry. Will be responsible for implementing existing computational models; assisting project teams in interpreting data from these models; developing new algorithms and computational methods for assessing data from high-throughput screens for physiochemical properties, metabolic stability and cell membrane permeability.

This position requires a Ph.D. in Chemistry, Biochemistry, or a relevant area, with a minimum of 3 years experience in computational modeling with modern tools and software, QSAR, data mining and principles of drug design. Proven experience in biopharmaceutics and pharmacokinetics is highly desirable. Candidate must have excellent oral/written communication skills and be able to work well with others in a matrix environment.

Glaxo Wellcome offers competitive salaries and a comprehensive benefits package. In addition, our location in Research Triangle Park, NC, the world's largest planned research center, offers access to three major universities, outstanding cultural activities and a superb quality of life.

For more information and to apply online, please visit our web site at www.glaxowellcome.com. Refer to Job ID #6694 under Employment Opportunities.

If you are unable to apply online, resumes may be mailed to: Job ID 6694, Glaxo Wellcome Inc., HR-South-E2440B, P.O. Box 13398, Research Triangle Park, NC 27709. Be sure to reference the Job ID# on all correspondence. (No phone calls or agency referrals please).

Breakthrough Medicines

For Everyday Living™ An Equal Opportunity Employer M/F/D/V

wellcome.co

laxoWellcome

(919) 483.



GENERAL PHARMACOLOGY AND CANDIDATE EVALUATION OPPORTUNITIES

RESEARCH SCIENTISTS, ELECTROPHYSIOLOGY

You will define the effect of these new chemical entities on the action potential of isolated cardiac tissues and define the underlying Ionic conductance processes affected. Ph.D. and 2 or more years of postdoctoral experience, and a strong publication record required. A strong background of *in vitro* electrophysiological techniques such as voltage and/or patch clamp techniques in cardiac tissues and/or cloned cells essential. Experience with *in vivo* cardiac conduction in large models and/or work with a General Pharmacology/ Safety Pharmacology group is desirable, but not required. Job Code: 9922831SCI

RESEARCH ASSISTANTS, ELECTROPHYSIOLOGY

The successful candidates will conduct electrophysiological evaluation of new drugs entities on ion channels in cardiac tissues and/or cloned cells, using voltage and/or patch clamp techniques. BS/MS with at least 2 years of experience in electrophysiology and knowledge of instrumentation, experimentation and reporting of data using graphical and statistical analyses required. Strong knowledge of computerized data acquisition systems and Windows NT operating systems essential. Understanding of cardiovascular physiology and pharmacology is desirable. Job Code: 9901901SCI

ASSISTANT SCIENTIST, CANDIDATE EVALUATION

You will conduct *in vivo* cardiovascular evaluation of new drugs entities with a skilled group of interdisciplinary scientists. BS/MS with at least 2 years of experience in pharmacology/physiology or comprehensive understanding of biological systems required. Surgical instrumentation, experimentation and reporting of data with graphical and statistical analyses essential. You should have diverse *in vivo* experience particularly related to cardiovascular aseptic survival surgical skills. Strong knowledge of computerized data acquisition systems and Windows NT operating systems essential. Job Code: 9923475SCI

ASSISTANT SCIENTIST, WBAL

You will be responsible for analytical, biological, cryosectioning, and phosphor imaging operations in order to clucidate whole-body distribution of radioactive test compounds. Work may include dosing, surgical techniques, sample collection, and euthanasia. You will also maintain inventory of consumables and parts and be responsible for radiological and biological safety, and cleanliness of instrumentation and laboratory. BS in Biological Science or equivalent along with 1-4 years' experience with tissue cryosectioning techniques required: BS in Animal Sciences desirable. Diverse work is mandatory, as is knowledge in identifying anatomical tissues and organs. Computer proficiency with Microsoft programs and desktop computer operating systems is essential. Knowledge of the safe handling of radioactivity and experience with phosphor imager, liquid scintillation counter and oxidizer operations also desirable. Job Code: 9922828SCI

Pfizer is proud to offer competitive salaries, exceptional benefits, tremendous opportunities for learning and advancement, and the rewards of living only hours from Boston, Providence and New York City on the beautiful Connecticut seashore. Please send your resume in confidence to: Pfizer Inc, Job Code: #_____

Central Research Division, c/o Aon Consulting, P.O. Box 25, Findlay, OH 45839, or e-mail to: Pfizer@aon-hros.com.

Pfizer offers a workplace rich with diversity and potential - an Equal Opportunity Employer.



LIFE IS OUR LIFE'S WORK.

Merck Research Laboratories in Rahway, New Jersey, a world leader in Biological and Pharmaceutical Research, is recruiting a synthetic bioorganic chemist for their Natural Products Chemistry Department. This is an excellent opportunity for individuals interested in joining an exciting, creative, and team-oriented environment focused on drug discovery.

Synthetic Bioorganic Chemist Natural Products Chemistry

The successful candidate is expected to dedicate his/her efforts to the synthetic modification of natural products using both synthetic organic chemistry and biocatalysis. It is imperative that the successful candidate have a strong background in organic chemistry with specialization in organic synthesis and/or natural products. Experience in the use of enzymes for biocatalysis under aqueous and non-aqueous conditions, knowledge of purification techniques and their application in the isolation of organic compounds, and familiarity with spectroscopic techniques for structure elucidation are additional skills that will be used as discriminators. The successful candidate will collaborate with members of the Natural Products Drug Discovery Department and other scientists in the Merck community and should be an independent thinker, automationfriendly, and able to perform the research activities with minimal supervision.

Candidates should have a Ph.D. degree in Chemistry or equivalent with strong emphasis in organic synthesis. Postdoctoral experience in organic synthesis or in the field of biocatalysis or bioorganic chemistry is desired.

Merck Research Laboratories are located approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Applicants should send their CV (including names and addresses of three potential references) to Merck & Co., Inc., P.O. Box 2000, AD #88, RY80-3, Rahway, New Jersey 07065.

Merck Research Laboratories is an equal opportunity employer.





AMDeC's NEW YORK CANCER PROJECT **PROJECT DIRECTOR POSITION**

The New York Cancer Project is sponsored by AMDeC (an Academic Medicine Development Company), a partnership of leading medical schools and research centers in the New York City metropolitan area. AMDeC's mission is to promote biomedical science and biotechnology development in the New York region. AMDeC has developed the New York Cancer Project (NYCP), a multi-year, longitudinal cohort study involving 300,000 individuals from the region. The NYCP builds upon the rich ethnic diversity of the region's populations, and will focus on enrolling particular subgroups of these populations. The study will collect interview data, anthropometric measures, and blood samples, creating the nation's largest multi-ethnic, nonrisk biorepository and database. The NYCP presents the opportunity for investigators to examine the distribution and prevalence of putative genetic mutations and polymorphisms, as well as environmental risk factors, among populations living in a relatively small geographic area who have variable lifestyles, socioeconomic status, and health backgrounds.

The NYCP has received \$12 million in funding to proceed with the two-year pilot phase which is intended to test and evaluate a variety of recruitment and enrollment strategies, as well as to establish the validity of the survey instruments and methods for utilization of the biorepository. It is anticipated that a cohort of 25,000 individuals will be enrolled in the pilot during a two year period. A full time Project Director/Principal Investigator is needed to oversee implementation of the Project.

Qualifications

- M.D. and/or Ph.D. If Ph.D. only, the degree must be in the one of the following fields: epidemiology, genetics, cancer biology or related fields.
- Experience in the design and implementation of large scale population-based studies, and/or clinical trials. Such experience could include employment with FDA, NIH, CDC or major pharmaceutical company.
- Experience with Institutional Review Board approval processes.
- Demonstrated ability to direct large interdisciplinary groups of investigators, as well as coordination of community and governmental organizations involved in health care issues.

In addition to attractive compensation and benefits, the Director will be granted affiliation with a major academic medical center and medical school in New York City. Please forward your resume/CV to AMDeC, 45 Rockefeller Plaza, Suite 918, New York, NY 10111.

PRE- & POSTDOCTORAL TRAINING IN MAMMALIAN **GENETICS**

The Jackson Laboratory, a non-profit research center, provides a unique research environment with unparalleled resources for training animal models of development & disease.

Areas of expertise include: Cancer, Developmental Biology/Aging, Genetics of Complex Traits, Genomics, Immunology/Hematology, Metabolic Diseases, Neurobiology, **Bioinformatics/Statistical Genetics** Cryopreservation/Assisted Reproduction

Letters of application should include: curriculum vitae, statement of research interests, list of publications, and names of three references. Predoctoral program is in conjunction with the University of Maine and is limited to US citizens or permanent residents.

To apply contact: Suzanne Serreze, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609 Phone: 207-288-6420; FAX: 207-288-6079; e-mail sbs@jax.org; http://www.jax.org EO/AA Employer

POSTDOCTORAL **RESEARCH** at The Wistar Institute

The Wistar Institute, an independent research organization located on the University of Pennsylvania campus, has NIH Training Grant-supported posi-tions available immediately for postdoctoral research in "Immunobiology of Vaccines" and "Basic Cancer Research." Selected candidates will train with immunologists, virologists, structural biologists and chemists in the field of vaccine design and development.

Candidates must be U.S. citizens or permanent residents with a maxiinum of three years of postdoctoral training. Minority applicants are strongly encouraged to apply.

If interested, please forward your C.V. and three letters of recommendation to: Human Resources **Department (indicating** research of interest) THE WISTAR **INSTITUTE**, 3601 Spruce St., Phila., PA 19104. EOE/AA/M/F/D/V



ACCELERATING LIFE SCIENCE AT A REELING PACE!

With 1,900 employees around the world, S670 million in revenues and an exhilarating growth rate of 23%, PE Biosystems is certainly living up to its missionto accelerate life science research through automated biotechnology systems and information. Already our Genetic Analyzers (Sequencers), DNA Synthesizers, reagents and software products have helped propel some of the biggest breakthroughs in human disease research and molecular diagnostics. And each new advancement is paving the way to bigger possibilities and exciting career opportunities every day.

APPLICATION SPECIALIST/SR. Sequencing

Providing worldwide applications support for Genetic Analysis products, you will develop and optimize DNA sequencing applications on 3700, 377 and 310 platforms. This will involve extensive interaction with R&D, product and marketing management groups, as well as field sales and support staff. You will also produce technical documents, support test sites, participate in field training, seminars and user meetings, assist product managers and marketing managers with strategy development, and perform pre-sales product demonstrations. You must passess the skills and knowledge normally acquired through the completion of a BS/BA (MS/PhD preferred) in Biology, Molecular Biology or Biochemistry and 3+ years experience (or 6+ years experience for senior level), or equivalent. Sequencing experience with automated DNA electrophoresis on ABI Prism 373, 377, or 310 is preferred. Excellent written and verbal communication skills, the ability to interact with customers and good bench skills are also needed. Requires travel (20%). Req.# 9840

APPLICATION SPECIALIST/SR.

Microsatellite Mapping

Providing worldwide applications focus for Genetic Analysis products, you will develop, optimize and support microsatellite mapping applications on 310, 377 and 3700 platforms. This will involve extensive interaction with R&D, product and marketing management groups, as well as field sales and support staff. You will also produce technical documents, support test sites, address seminars and user meetings, assist product managers and marketing managers with strategy development, and perform pre-sales product demonstrations. You must passess the skills and knowledge normally acquired through the completion of a BS/BA (MS/PhD preferred) in Biology, Molecular Biology or Biochemistry and 3+ years experience (or 6+ years experience for senior level), or equivalent. Experience with genetic mapping on ABI Prism 373, 377 or 310 is strongly preferred. Excellent written and verbal communication skills, the ability to interact with customers and good bench skills are also needed. Requires travel (20%). Req.# 9852

PHARMACEUTICAL MARKETING MANAGER

Using your project management skills, you will develop and support strategic marketing for Genetic Analysis products in the pharmaceutical market in order to maximize profitability. We will rely on you to integrate functions of R&D, manufacturing, marketing, sales and service. You must be an independent self-starter with the knowledge and skills normally acquired through the completion of a MS degree (PhD highly beneficial); 5-8 years relevant technical marketing or selling experience in pharmaceutical or associated market; or an equivalent combination of education and experience. Requires excellent written and verbal communication skills. Rea.# 8460

PRODUCT SPECIALISTS/ASSOCIATE PRODUCT MANAGERS

You will be responsible for marketing and product management of Genetic Analysis instrument, reagent and sample preparation systems. Specifically, you will set product definition, manage product development, develop promotional and sales collateral, and provide technical sales training. In addition, you will act as the contact for issues regarding product and sales, quality, cost and performance, and serve as liaison between the customer and PE Biosystems departments. You must be an independent self-starter with the skills and knowledge normally acquired through the completion of a BS in the biological sciences (MBA a plus) and 3 + years experience selling or marketing scientific products. Excellent communication skills are essential. Involves worldwide travel. Req. #5 9841, 9844, 10773



ANALYTICAL CHEMIST Synthesis and Arrays R&D

Apply your strong analytical skills to the design and development of novel oligonucleotide array-based assays and systems. You will be responsible for designing and implementing methods to assess quality, purity and yield of both chemical and enzymatic reactions, in solution and/or solid phase. You will apply a wide variety of advanced analytical technologies to provide insight into the oligonucleotide array assays under development. As part of a multidisciplinary team, you will contribute to reagents design and reaction conditions optimization to maximize efficiency and efficacy of such reactions. Requires the knowledge and skills normally acquired by the successful completion of an MS or PhD in Analytical Chemistry, Physical Chemistry, Biochemistry or related field, with 2+ years relevant experience in an industrial or academic setting (or equivalent). Excellent analytical and troubleshooting skills, and the ability to develop new solutions to complex problems in DNA analysis are also required. Experience in DNA synthesis and nucleic acid hybridization is highly desirable. Experience in gel electrophoresis, HPLC, and mass spectroscopy is desirable. Good communication skills are a must. Req.# 9859

SCIENTIST

Synthesis and Arrays R&D

We are looking for a highly motivated scientist who conducts research pertinent to the evaluation and implementation of DNA arrays. This individual will undertake and evaluate experiments to allow multiplex detection of SNPs by using oligonucleotide arrays in combination with solution phase, allele specific assays. This position requires an MS or PhD in Molecular Biology, Biochemistry or related field with at least 3-5 years relevant industrial or academic experience. Hands-on experience with molecular biology techniques, including ligation assays, PCR, DNA sequencing and nucleic acid hybridization assays, and an understanding of the underlying mechanisms are required. Familiarity with oligo primer design programs is a plus. Ability to learn and utilize new software is essential, as are excellent verbal and written skills. Req.# 9858

In exchange for your talents, we offer a competitive salary and benefits package with advancement potential for your career. For consideration, please send your resume, indicating appropriate Req.#, to: PE Biosystems, Human Resources Department, Attn: Lori Mangual, 850 Lincoln Centre Drive, Foster City, CA 94404. You may also fax to 650/638-5874, or email us at manguale@pebio.com. PE Biosystems is an equal opportunity employer.

www.pebio.com

PE Biosystems A DIVISION OF PERKIN-ELMER



Plant Molecular Geneticist Permanent Position Hardwood Tree Improvement and Regeneration Center (USDA Forest Service and Purdue University)

A permanent research scientist position (GS-12/13/14) is available for development of DNA markers and protocols for their application in hardwood breeding and genetics. The position will be part of an interdisciplinary team of six university and federal scientists and tree improvement specialists whose research and development efforts will focus on improvement of central hardwood tree species and hardwood forest regeneration issues. The team will work in the Hardwood Tree Improvement and Regeneration Center (HTIRC) at Purdue University, West Lafayette, IN, which is a collaborative effort between North Central Research Station, Purdue Department of Forestry and Natural Resources, Indiana Department of Natural Resources Division of Forestry and Indiana Forest Industry.

Starting annual salary will be between \$47,891 and \$67,298.

The HTIRC will be located in 2500 sq. ft. of newly remodeled laboratory space within Purdue's new Agricultural Genomics Center (Whistler Ag Research Building) that includes a DNA analysis core facility.

Candidates should submit a resume, college transcripts, brief description of professional interests and goals, several recent publications, and the names, addresses and phone numbers of three professionals who can provide references, by **April 30**, **1999** to: Jim Elioff, Personnel Management, USDA Forest Service, North Central Research Station, 1992 Folwell Avenue, St. Paul, MN 55108. Candidates must be US citizens and meet OPM Qualifications Handbook X-118 requirements for GS-12/13/14 positions. For information about the Office of Personnel Management qualification standards, or other personnel matters, please call Jim Elioff at (651) 649-5022 (email: jaelioff/nc@fs.fed.us). The official announcement will be posted at http://fsweb.nc.fs.fed.us/pm/employment/Permanent. *The USDA Forest Service is an equal opportunity employer*.

For information about the HTIRC and goals of this position, contact: Dr. Charles H. Michler, Center Director, at (715) 362-1113 or (765) 496-6016 (email: cmichler/nc_rh@fs.fed.us; cmichler@fnr.purdue.edu).



Web site: www.bio.utk.edu/microbio/cir/index.html E-mail: Conferences@utk.edu

SYMPOSIUM



Promoting the advancement of scientific knowledge and research in the molecular biology of aging.

The symposium will bring together international scholars and young scientists working in diverse areas to identify productive research areas in aging.

Topics Related to Aging: Genetics, Immunology, Mitochondrial Diseases, Blood-Brain Barrier and Metalloproteinases, Protein Turnover, Systems of Repair and Plasticity, Clinical Applications and Chemoprotection

Organizers: Scientific Education Partnership, a research partnership between the University of Kansas, the University of Missouri–Kansas City, and the Hoechst Marion Roussel Foundation.

Registration/Call for Posters/Further Information:

Submit poster abstracts by July 21, 1999 Marvin Hunt, KU Continuing or Ka

Education Phone 785/864-7857 E-mail mhunt@ukans.edu Fax 785/864-5074 or Karen Hickey, KU Department of Research and Public Service Phone 785/864-2363 E-mail khickey@ukans.edu

www.kumc.edu/kuce/app/nba/nba.html

Register by August 16, 1999. Participation is restricted to 250 attendees.

Postdoctoral Fellowships

The UNC Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill will have openings in 1999–2000 in its training program, now in its 24th year, for persons completing graduate studies to train with excellent investigators in basic research in tumor virology, molecular carcinogenesis, molecular therapeutics, cancer cell biology, genetics, tumor immunology, and research that interfaces with clinical and physical sciences. Training is available in DNA repair, replication, and mutagenesis; regulation of cellular proliferation and differentiation including growth factors, signal transduction pathways, and intercellular communication; molecular immunology; molecular genetics and epidemiology of cancer; and human disease models and gene therapy. Unique training resources and core facilities are supported by the NCI-designated UNC Lineberger Comprehensive Cancer Center.

Preceptors are: Steven Bachenheimer, Albert Baldwin, Victoria Bautch, David Brenner, Keith Burridge, Sharon Campbell, Stephen Chaney, David Clemmons, Edward Collins, Marila Cordeiro-Stone, Channing Der,

Robert Duronio, H. Shelton Earp, Jeffrey Frelinger, Frank French, Jack Griffith, Eng-Shang Huang, Clyde Hutchinson III, Kenneth Jacobson, Rudolph Juliano, David Kaufman, Shannon Kenney, Ryszard Kole, Steven Leadon, David Lee, Patricia Maness-Tidwell, William Marzluff, Beverly Mitchell, Joseph Pagano, Tom Petes, Mark Peifer, Nancy Raab-Traub, James Raleigh, Dale Ramsdeo, R. Jude Samulski, Aziz Sancar, Ronald Swanstorm, Lishan Su, Holden Thorp, Jenny Ting, Ronald Thurman, Michael Topal, Terry Van Dyke, Jean-Michel Vos, Kevin Weeks, Bernard Weissman, Elizabeth Wilson, and Yue Xiong.

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

Joseph S. Pagano, M.D. CB# 7295 UNC Lineberger Comprehensive Cancer Center School of Medicine University of North Carolina at Chapel Hill Chapel Hill, NC 27599-7295

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

Group Leader/Protein Enhancement Program

We are seeking a highly talented individual to lead a molecular biology/biochemistry research effort and coordinate genomic and molecular breeding efforts aimed at enhancing protein and amino acid content in grains. This job provides exceptional career growth and leadership opportunities. Minimum requirements include a Ph.D. and 5 years experience in molecular biology, genetics, biochemistry or a related discipline. You should also have exceptional people management skills and a proven record of project management success. **Job Code: GL-PG**

Bioinformatics Team Lead

Assume responsibility for the development and implementation of a bioinformatics plan that addresses the identification, quantification and functional evaluation of the genes associated with quality traits in plants. You will also develop an individual research program that supports our major focus areas in nutrition and food applications of plants. You must have knowledge in the fields of functional genomics, protein function and bioinformatics. A Ph.D. in a life or physical science is preferred but equivalent experience is acceptable. Database and computer skills are essential. Your knowledge in database and computer science will be supplemented with training in Monsanto's state-of-the-art databases and bioinformatics tools. Additional knowledge of human or animal nutrition, statistics or mathematics and plant breeding are also desired. Job Code: **BTL-PG**

Gene Expression Project Leader

Develop the technology needed to measure gene expression in plant tissues, with an initial focus on mRNA transcription profiling. You will be expected to develop an understanding of patterns of gene expression in developing plants as they relate to quality traits and nutritional composition. You must have a Ph.D. in Molecular Biology with knowledge of cellular processes and plant physiology. Excellent laboratory and communication skills are necessary. Candidates with exceptional computer skills, knowledge of statistics and experience in RT-PCR and RNA extraction/ handling techniques are preferred. Job Code: PL-PG

Biochemist/Molecular Biologist (Ph.D.)

You will work as part of a multi-disciplinary team involved in the metabolic engineering of complex pathways in plants. We are seeking an individual highly experienced in biochemistry with additional skills in molecular biology. We prefer a Ph.D. with postdoctoral experience (or equivalent experience in a relevant field). Knowledge in the following areas is preferred: metabolic pathways and engineering in plants; developing and performing high through-put assays for enzyme activity; designing and performing metabolic flux analysis. In addition, you must have excellent technical management and communication skills and work well in a team environment. Job Code: BMB-PG

Biostatistician

Take responsibility for the design of experiments, analysis of biological data and reporting of the results. You must have an MS or Ph.D. in Statistics or Biostatistics with some experience in agriculture. Candidates with a degree in Mathematical Physics will also be considered. Specialization in experimental design, analysis of messy data, repeating measures and linear stochastic programming would be beneficial as well as experience in computer programming using SAS and a relational database such as Oracle. **Job Code: BIO-PG**

Analytical Chemist

You will join a multi-disciplinary team involved in analysis of plant metabolites and natural products. You must possess a BS or MS in Analytical Chemistry and have experience in modern chromatography and mass spectrophotometric analyses. In addition, you should possess the ability to formulate experimental plans, efficiently complete projects and communicate broadly in a team-based environment. **Job Code: AC-PG**

We offer a competitive salary and benefits package. For consideration, please send your resume to: Monsanto, Job Code:____(select from above), 700 Chesterfield Pkwy North, Mail Zone: BB5B, Chesterfield, MO 63198; Fax: 314/737-6419. EEO/AA Employer M/F/D/V. Please visit our website at www.monsanto.com





Bacterial Pathogenesis Faculty Position Department of Microbiology and Immunology The University of Texas Medical Branch

The Department of Microbiology and Immunology, UTMB, invites applications for a tenure-track position at the Asst. Assoc. Professor level. Applicants should have a M.D. and/or Ph.D. degree and will be expected to develop, or have previously established, an independent research program relating to bacterial diseases of the gastrointestinal tract with emphasis on molecular pathogenesis. Candidates with clinical expertise are encouraged to apply and a joint appointment in the Division of Infectious Disease is possible. Current interdisciplinary strengths include molecular pathogenesis of enteric bacterial infections, host defenses, vaccine development, and investigation of intracellular pathogens. Additional strengths include nationally recognized molecular research on RNA viruses, T-cell activation, and host defenses to microbial pathogens. We offer a competitive startup package, modern laboratory space, and an interactive environment with excellent opportunities for collaborations with the basic science and clinical departments, the Sealy Centers for Molecular Science and Structural Biology, and the WHO Collaborating Center for Tropical Diseases. Please send a curriculum vitae, a summary of past accomplishments, future research plans, and the names, addresses, and telephone numbers of three references to:

Bacterial Pathogenesis Search Committee Department of Microbiology and Immunology The University of Texas Medical Branch 301 University Boulevard Galveston, TX 77555-1070

UTMB hires only persons authorized to work in the United States. UTMB is an AA/EO Employer. AFF/D/V



Chair Department of Radiology

The University of Pittsburgh is seeking a Chair for the Department of Radiology. The University of Pittsburgh has a strong history and commitment to clinical and academic excellence in the field of Radiology. The Department is comprised of approximately 60 clinical faculty and 20 research faculty providing radiologic services at four major teaching hospitals and three community hospitals. The major subspecialties of the Department are Abdominal Imaging, Chest Radiology, Musculoskeletal Radiology, Neuroradiology, Nuclear Medicine, Pediatric Radiology, Vascular and Interventional Radiology, and Women's Imaging. The Department has state of the art research sections in Magnetic Resonance Imaging with 3T and 1.5T dedicated magnets, Positron Emissions Tomography with cyclotron, 2 PET tomographs and one combined CT/PET tomograph, Radiological Imaging, and Informatics with a large PACS program.

The responsibilities of the Chair include the direction and administration of the professional, educational, research and outreach programs of the Department of Radiology. In addition, the Chair will oversee, coordinate, and encourage research within the Department. Candidates must have a distinguished record in Radiology, and possess strong leadership ability and management experience. Also, candidates must have a firm commitment to the education of fellows, residents and medical students, and qualify for the academic rank of Professor of Radiology.

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

Please send *curriculum vitae* and bibliography to the Chair of the Search Committee:

Leonard Firestone, M.D. Chairman, Department of Anesthesiology/CCM University of Pittsburgh Medical Center A1305 Scaife Hall Pittsburgh, PA 15261



Avigen, Inc., a leader in the development of gene therapy based on adeno-associated virus (AAV) for the treatment of inherited & acquired diseases, has a great opportunity for a Director of Manufacturing and Production Associate to join our research team in Alameda, Ca.

Director of Manufacturing

We have an immediate opening for a Director of Manufacturing, who will be responsible for the production/scale up for Avigen's AAV vector for gene therapy clinical studies. Candidate must have a Masters degree, a Ph.D. is desirable, and at least 5 years progressive prior experience. Must be able to work with minimal supervision, be a self-starter and possess excellent people and organizational skills. This position offers a great opportunity for growth for the right person.

Production Associate

This position is responsible for production of materials for clinical trials, which involves cell culture, transfection, harvest and purification of the lysate through multiple steps involving precipitation, centrifugation and ultracentrifugation.

Position requires a BS in Biology with 3–5 years experience working under cGMP guidelines in a manufacturing environment. Strong cell culture experience required and ability to work in a Class 10,000 core facility.

We offer very competitive salaries, benefits paid in full by the Company, stock options, 401(k), and an exciting opportunity to work with a dynamic team focused on exploring the impact of gene therapy on selected human diseases.

To apply, email/send/fax resume, **specifying position of interest**, to: Avigen, Inc., Human Resources, 1201 Harbor Bay Parkway, Suite 1000, Alameda, CA 94502; e-mail: sdelph@avigen.com, fax: (510) 748-7155. EOE

DIRECTOR Sponsored Programs

 $\left(\right)$

Brandeis University, located in Waltham, MA, was founded in 1948. Though only 50 years old, Brandeis is an internationally recognized research university dedicated to the advancement of the humanities, social, natural and physical sciences.

Oversee sponsored research activities totaling \$45 million. Report to the Associate Provost and assume responsibility for sponsored research policies and obligations. Help acquire outside funding and assure regulatory compliance. Requires a thorough knowledge of university-level research administration and government agency funding, strong management, financial and technological skills and 7-10 years of related experience. Master's degree preferred.

Please submit letter of interest and CV to: The Employment Administrator, Brandeis University, Mailstop 118, PO Box 9110, Waltham, MA 02454-9110. Fax 781-736-4466. PLEASE REFERENCE JOB #2068. For information on additional openings, call 781-736-JOBS. Brandeis University is an EEO/AA employer M/F/D/V. Non-smoking environment.



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 productivity. 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 Women and Minority Candidates are Encouraged to Apply.

PENNSTATE University Park

HEAD. DEPARTMENT OF BIOLOGY

Penn State is seeking an individual with an outstanding research record to head its Department of Biology. The department has 30 faculty at the University Park Campus (and 23 at 15 Commonwealth Campuses) with strengths in plant molecular biology, evolutionary genetics, plant and animal physiology, neuroscience, developmental biology, and ecology. The biological sciences are undergoing substantial growth at Penn State, and the Department of Biology is playing a major role in the expansion. Quality research facilities and support staff are available to foster excellence in research and instruction. Credentials appropriate to the rank of tenured full professor are required; teaching and administrative experience is desirable. Review will begin May 1 and will continue until the position is filled. Submit curriculum vitae and names of three references to:

Andrew Clark Box S-4727 **517 Thomas Building** The Pennsylvania State University University Park, PA 16802

Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

Purdue Biopharma L.P.

immunotherapeutics research and be responsible for target identification, validation, and drug evaluation for our synthetic antibody and vaccine programs. Experience managing teams of Scientists is strongly desired. Candidates holding M.D. or Ph.D. degrees, or with highly relevant academic experience are highly encouraged to apply.

Head, Protein Production

The successful candidate will have 5-10 years of industry experience developing small and large-scale protein production methods. Extensive knowledge of transient expression and stable expression strategies is important, as is knowledge and experience with the regulatory aspects of cell banking and cGMP production.

Head, Protein Purification

The successful candidate will have 5-10 years of industry experience developing small and large-scale protein purification methods, and have extensive knowledge of regulatory requirements and cGMP production.

Laboratory Heads

Successful candidates will have at least 2 years of post-doctoral experience in one of the areas listed above.

Research Associates

Successful candidates will hold B.A., B.S., or M.S. degrees and have relevant experience in one of the areas listed above.

CHEMISTS

-Combinatorial Chemists

Requires a BS, MS or Ph.D. in synthetic organic chemistry with 3+ years of experience including expertise with the latest solid-and-solution-phase synthetic techniques as well as applied analytical methods. Familiarity with electronic database systems and on-line literature tools is important.

Synthetic Chemists

Requires a BS, MS or Ph.D. in synthetic organic chemistry with 3+ years of broad range experience covering design, synthesis, purification and analytical characterization of heterocyclic molecules.

Visit our website at www.purduebiopharma.com

For immediate consideration, qualified applicants should mail or fax resumes indicating position of interest and salary requirements, to: Associate Director, Human Resources Services, Dept-SM, Purdue, 100 Connecticut Avenue, Norwalk, CT 06850; Fax: (203) 851-5300. Corporate standards require drug

testing and background investigation. We are an Equal Opportunity Employer committed to a diverse workplace.



Science into Practice



HOWARD HUGHES MEDICAL INSTITUTE

The Howard Hughes Medical Institute

conducts biomedical research in the areas of cell biology, genetics, immunology, neuroscience and structural biology at over seventy locations around the United States. HI-IMI regularly has positions open for research and administrative personnel.

Laboratory Positions:

- Postdoctoral Fellowships
- Research Specialists/Technicians
- Research Secretaries

Administrative Positions:

- Managers
- •Administrative Assistants
- Purchasing Coordinators
- Receiving Clerks

Institute employees enjoy competitive salaries and an excellent benefits package. HHMI is an equal opportunity employer. Please visit our website at **www.hhmi.org/jobs** for a listing of available positions.

DIRECTOR, DIVISION OF BACTERIAL PRODUCTS

The FDA, Center for Biologics Evaluation & Research, Office of Vaccines Research & Review located in Bethesda, MD is recruiting a Director, for its Div. of Bacterial Products. The Director will supervise the activities of the Division, which are to conduct scientific research related to the microbiology, pathogenesis, and immunology of bacterial diseases, and to review INDs and Product License Applications for bacterial vaccines and related products.

Qualifications: U.S. CITIZENSHIP REQUIRED.

Physicians – Applicants must have a Doctor of Medicine or Doctor of Osteopathy degree from an accredited institution and additional clinical and/or research training. Graduates of foreign medical schools must submit a copy of their permanent Education Commission for Foreign Medical Graduates (ECFMG) certificates.

Scientists – (other than physicians) Applicants must have an advanced degree in microbiology, immunology, chemistry or related field and additional research training.

Applicants must be able to evaluate the safety, efficacy and public health significance of bacterial vaccines and related products, demonstrate leadership and managerial ability, and deal effectively with government and pharmaceutical officials, representatives of the scientific and academic communities, and national and international health organizations. Position is available immediately and can be filled either as a Civil Service or U.S. PHS Commissioned Corps position.

Physicians: Salary range for Civil Service positions at GS-15 level is \$80,658 to \$104,851 per annum. Physicians may also be eligible for either a Physician's Comparability Allowance of \$4000 to \$20,000 per annum, or Physician Special Pay up to \$151,800 based on experience, qualifications and medical specialty.

Scientists: (other than physicians), Salary range for Civil Service position at GS-15 is \$80,658 to \$104,851 per annum. Scientists may be eligible for the Senior Biomedical Research Service, which pays up to maximum of \$151,800. Positions may be filled by appointment in the U.S.PHS Commissioned Corps with commensurate salary benefits. To apply: Call Ms. McGahey at 301-827-0657 for application procedures & additional instructions. Applications must be received or postmarked by May 30, 1999.

FDA is an equal opportunity employer and has a smoke free environment.

PARKE-DAVIS LABORATORY FOR MOLECULAR GENETICS Alameda, California Director, Molecular Biology

The director will lead a team in gene identification through positional cloning and other techniques in support of the Company's drug discovery programs across therapeutic areas. S/he will report to the Senior Director and support the accelerated growth of the Laboratory. As a member of Parke-Davis Laboratory for Molecular Genetics' senior management team, the desired candidate will:

- Lead a team of ten to fifteen scientists in molecular biology for gene identification using positional cloning and other techniques, work closely with human and mouse genetics research, statistical genetics and bioinformatics.
- Integrate gene identification efforts into effective research programs to support drug discovery and closely collaborate with the Company's molecular biology and therapeutically oriented biology research units.
- Expand genetics research into major areas of interest for the Company's discovery program (metabolic, cardiovascular, CNS, anti-inflammatory diseases).

Candidates for this position will have a Ph.D. degree and postdoctoral training in molecular biology or molecular genetics. The preferred candidate will be a recognized expert in expression profiling and positional cloning with a minimum of 10 years of experience and an excellent track record as a leading scientist. Experience in leading a scientific team, either in an academic lab or industry is strongly desired.

BioQuest has been retained to conduct this search. Please submit your resume to R. Sandmeier, Ph.D., BioQuest Inc., 100 Spear Street, Suite 1125, San Francisco, CA 94105, by e-mail (sandmeier@bioquestinc.com) or call during West Coast business hours 415-777-2422.

> BIOQUEST INCORPORATED Executive Search Consulting

Faculty Position Department of Molecular and Medical Genetics Oregon Health Sciences University Portland, Oregon

Applications are invited for an Assistant/Associate Professor position. The Department seeks individuals who have demonstrated research excellence in eukaryotic genetics. Applicants with special expertise in molecular and developmental genetics are encouraged to apply, in order to complement existing programs. Applicants should include a curriculum vitae, a brief description of research accomplishments and future research goals, and the names of three references. Deadline is July 15, 1999. Please address applications to:

> Susan Olson, Ph.D. c/o Janice Blouse Department of Molecular and Medical Genetics, L103 Oregon Health Science University 3181 SW Sam Jackson Park Road Portland, OR 97201-3098

OHSU is an EEO/AA Employer Web Site Address: http://www.ohsu.edu/som-MedGen/ genpage.htm

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.



AWARDS FOR INTERNATIONAL RESEARCH AND TRAINING FROM THE FOGARTY INTERNATIONAL CENTER AT NIH

The following new and ongoing programs are available:

INTERNATIONAL RESEARCH SCIENTIST DEVELOPMENT AWARDS

This individual award supports basic, behavioral and clinical postdoctoral scientists for mentored research in infectious, chronic/degenerative or mental health disorders at centers of excellence in developing countries.

Deadline: May 21

INTERNATIONAL MATERNAL AND CHILD HEALTH RESEARCH AND TRAINING PROGRAM

This institutional award supports collaborative research and training programs in maternal and child health threats that impact developing country populations. **Deadline: May 18**

INTERNATIONAL TRAINING IN MEDICAL INFORMATICS

This institutional award supports training for Sub-Saharan African and Latin American scientists, in the context of an international research program, to apply state-of-the-art information and communication technologies to research and health surveillance activities in their home countries.

Deadline: May 20

MINORITY INTERNATIONAL RESEARCH TRAINING

This institutional award supports scientific training programs at U.S. universities to offer international research opportunities for minority undergraduate and graduate/medical school students. **Deadline: May 7**

FOGARTY INTERNATIONAL RESEARCH COLLABORATION AWARD

This individual award provides funding to foster international research partnerships between NIH-supported U.S. scientists and their collaborators in developing countries.

FIRCA Deadlines: November 25, March 25, and July 25 AIDS-FIRCA Deadlines: January 2, May 1, and September 1

SENIOR INTERNATIONAL FELLOWSHIP

This individual award supports opportunities for mid- and senior-career level U.S. scientists to conduct biomedical and behavioral sciences research at foreign institutions. **Deadlines: April 5, August 5, and December 5**

Information may be obtained from the Fogarty International Center web site: http://www.nih.gov/fic/opportunities or by contacting: Fogarty International Center Division of International Training and Research Building 31 Room B2C39 National Institutes of Health Bethesda, MD 20892-2220 Tel: 301-496-1653 Fax: 301-402-0779

NIH is an Equal Opportunity Employer

The Picower Institute for Medical Research

Ph.D. Investigators & RESEARCH ASSISTANT

We are a growing, independent, not-for-profit biomedical research institute located on the campus of the North Shore University Hospital in Manhasset, Long Island. We're seeking professionals with training in the following areas:

Ph.D.'s:

- Immunology Explore basic and clinical applications of antigen presentation. (*RB01*)
- Biology/Biochemistry Study the molecular mechanism of action of MIF. (RB02)
- Molecular Biology Investigate the mechanisms that mediate suppression of apoptosis in cancer cells with an emphasis on signal transduction pathways working down stream of survival factors that play an important role in transformation. (MR01)
- Molecular Biology Study Signal Transduction pathways that regulate the chemokine receptor function in HIV-1 infection. Requires theoretical/practical knowledge of signal transduction mechanisms, gene cloning and mutagenesis, molecular biology, and protein analysis. (MB01)
- Hematology assist in developing a new laboratory in experimental hematology with an emphasis on molecular biology of hematopoesis (MM01)

Research Assistant – Requires an M.S. in Biology or Molecular Biology and a minimum of 2 years' laboratory experience in Molecular Biology (MR02)

We offer competitive salaries, excellent benefits including a generous 403(b) plan, and a stimulating collaborative research environment in which to thrive. For strictly confidential consideration, please send your "c.v.", with salary requirement and appropriate code, to: HR Dept.-PDS, THE PICOWER INSTITUTE FOR MEDICAL RESEARCH, 350 Community Drive, Manhasset, NY 11030, USA; Fax #: (516) 869-0629; e-mail: hr@picower.edu. We are an equal opportunity/affirmative action employer.

HUMAN GENOME SEQUENCING CENTER **BAYLOR COLLEGE OF MEDICINE**

The Baylor College of Medicine Department of Molecular and Human Genetics (A. Beaudet, Chair) is seeking additional faculty as part of the expansion of the Human Genome Sequencing Center (R. Gibbs, Director; G. Weinstock, Co-Director). The Sequencing Center is currently undertaking the generation of human genomic sequence, as well as the analysis of the Drosophila and Dictyostelium genomes. Individuals with active interest in one or more of the areas of bioinformatics, robotics, genome mapping, comparative genome analysis, high throughput DNA sequencing, or fluorescent dye chemistry are welcome to apply. Positions are available at the level of Assistant Professor or higher. Additional information is available at the Sequencing Center (http://www.hgsc.bcm.tmc.edu) and Departmental (http://www.bcm.tmc.edu/ molgen) web sites. Please send a Curriculum Vitae and a letter briefly describing your research interests to:

Arthur L. Beaudet, M.D. Human Genome Sequencing Search Committee Dept. of Molecular and Human Genetics **Baylor College of Medicine** One Baylor Plaza, MC: BCM225 Houston, Texas 77030 Tel: (713) 798-4795 Fax: (713) 798-7773 email: abeaudet@bcm.tmc.edu

Baylor College of Medicine is an equal opportunity/affirmative action/equal access employer.

Kimberly-Clark Corporation ENTREPRENEURIAL BIOSCIENTISTS and HEALTH CARE PRODUCT COMMERCIAL DEVELOPMENT MANAGER

Kimberly-Clark is a Fortune 200 recognized global leader in the manufacture of tissue, personal care and health care products with sales over 13 billion dollars. The company has manufacturing operations in 48 countries and sells products in more than 150 countries.

We are an entrepreneurial arm of the corporation searching and developing new technology based businesses to support an ambitious growth plan of the corporation.

BIOSCIENTISTS: We are seeking creative, versatile and dynamic bioscientists in the following disciplines with a proven record of innovative thinking and accomplishments, and strong interest in the creation of new health care products and businesses

MICROBIOLOGY BIOCHEMISTRY **CELL BIOLOGY** IMMUNOLOGY SKIN SCIENCE TISSUE ENGINEERING DRUG DELIVERY ANTIMICRO BIOMATERIAL BIOPOLYMER ANTIMICROBIAL MEDICINAL CHEMISTRY MOLECULAR BIOLOGY PHARMOCOLOGY

A PhD degree is preferred. Two to seven years of work experience, either industrial or academic, and exposure to commercialization of new technology or new business development is desired. Successful candidates must have a broad bioscience knowledge base, strong initiative, quick learning ability, good business sense and entrepreneurial spirit as well as rigorous scientific training and research capability.

HEALTH CARE PRODUCT COMMERCIAL DEVELOPMENT MANAGER: We are also seeking an experienced product or business development manager with proven accomplishments in the health care/medical product industry.Successful candidates must have a technical degree, preferably a PhD in bioscience or material science and at least five years of management experience and a proven track record in new product development in the health care or bioscience field.

This unique opportunity is located at our R&D campus in Roswell, Georgia, an attractive and growing suburb north of Atlanta. We offer a competitive salary and benefit package commensurate with education and demonstrated track record. Send your credentials to:

Kimberly-Clark Corporation, R&D_Recruiting-NLS, 1400 Holcomb Bridge Road, Roswell, GA 30076-2199; fax (770) 587-8136; e-mail to nsherman@kcc.com. Principals only. EB Kimberty-Clark Corporation An Equal Opportunity Employer





THE J. DAVID GLADSTONE **INSTITUTES** University of California, San Francisco

POSTDOCTORAL FELLOWSHIP

Available in the laboratory of Dr. Robert Pitas in the Gladstone Institute of Neurological Disease. Perform research related to the molecular mechanisms for the effects of apolipoprotein E in the nervous system. A strong background in molecular biology required. Experience with yeast two hybrid system is desirable. Candidate should possess Ph.D., M.D., or both.

Please send CV and references to: Job #C99-019. **Gladstone Institutes** P.O. Box 419100 San Francisco. CA 94141: fax (415) 431-4039. Email: hr@gladstone.ucsf.edu Web:http://gladstone.ucsf.edu

Equal Opportunity/Affirmative Action Employer

Your work means



He can enjoy an active lifestyle

I t's our solid dedication, vision and constant search for answers that allow us to touch millions of people around the world every day. As a major division of Fortune 100 American Home Products Corporation, we help people lead healthier lives through the

development of innovative pharmaceutical, vaccine and nutritional products. We achieve this through our superior research, manufacturing, sales and marketing capabilities. Enjoy the freedom to develop your own career while having the support of a valuable team.

Research Scientist Neuroscience

Princeton, NJ

As a Research Scientist, you will provide cell biology and biochemical expertise for the study of cellular responses to various types of insult and the study of neuroprotective mechanisms. Candidate must have experience with culturing various cell lines including primary neuronal cultures and should have a strong background in immunohistochemistry. A B.S. in the Biological Sciences, Neuroscience or a related scientific discipline along with 7 years of experience or an M.S. with 5 years of relevant experience is required. Additionally, familiarity with biochemical assays and instrumentation is a must.

Wyeth-Ayerst offers competitive compensation and benefits programs including stock options, child-care subsidies, business casual Fridays, educational assistance and professional development programs. Please forward your resume with salary requirements to: Wyeth-Ayerst, Reference OPSCI-4586, P.O. Box 7886, Philadelphia, PA 19101-7886.

Reference OFSCI-4536, F.O. Box 7886, Philadelphia, PA 19101-7886. Fax in fine mode to: (610) 989-4854. Email: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume). For more information, visit our website at www.ahp.com/wyeth.htm Principals only. Equal Opportunity Employer M/F/D/V



A W A

A AL

DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS Faculty Position in Molecular Pathogenesis/Immunology

Candidates are invited to apply for a tenure-track Assistant Professorship at the Medical College of Wisconsin. Investigators interested in the interface of viral or bacterial pathogens with their mammalian hosts, in particular the mechanisms by which pathogens manipulate the innate or acquired immune response or perturb cellular biology, are encouraged to respond. Outstanding candidates of higher rank will also be considered.

The Department is under vigorous new leadership and has entered a period of expansion which is complemented by college-wide initiatives in human and molecular genetics, cellular/molecular neuroscience, signal transduction, and cancer research.

The successful applicant will join a collegial group of interactive, well-funded and productive investigators and will be expected to establish a strong, independent research program and participate in graduate and medical student teaching. Competitive salary support, startup funds and renovated laboratory space will be provided; state-of-the-art core facilities are available. A Ph.D. and/or M.D. degree and post-doctoral experience are essential. Applications will be considered as they arrive, but must be received by May 21, 1999; applicants should submit a curriculum vitae, statement of research interests, and the names of 3 references to: **Dr. Paula Traktman**, **Chairman**,

Traktman, Chairman, Department of Microbiology and Molecular Genetics, Medical College of Wisconsin, 8701 Watertown Plank Rd., Milwaukee, WI 53226. E-mail: ptrakt@mcw.edu www.mcw.edu/microbiology

ALL NO

(MM)





PIONEER HI-BRED INTERNATIONAL, INC.

Pioneer Hi-Bred International, Inc. is a leading supplier of agricultural genetics to the world's farmers. We are seeking experienced regulatory professionals to play an important role in commercializing exciting new seed products developed using biotechnology. Our Regulatory Affairs operations are centered at our modern research facilities located in the Des Moines, IA area.

REGULATORY SCIENCE COORDINATOR (Ad Code #99089C) - Responsibilities include coordinating Regulatory Science activities, serving as Study Director, maintaining overall responsibility for the successful conduct of regulatory laboratory studies performed in-house and by contract labs, and ensuring regulatory studies are conducted in compliance with EPA Good Laboratory Practice (GLP) regulations. A Ph.D. in biological or biotechnology subject area, knowledge of GLP practices and a minimum 5-7 years appropriate research/supervisory experience.

REGULATORY AFFAIRS MANAGER (Ad Code #98284C) -Responsibilities include determining regulatory requirements for testing and approval of new products, designing regulatory studies, analyzing scientific data and preparing applications for review by government agencies, worldwide. A Ph.D. in a scientific subject, or equivalent experience in the biological or chemical sciences, familiarity with applicable EPA and FDA regulatory requirements and GLP compliance, and at least 5 years related experience in regulation of food or pest control products is required.

FIELD STUDIES COORDINATOR (Ad Code #99090C) -Responsibilities include determining appropriate study protocols for field research, planning experimental design of field studies, coordinating data collection, reviewing data and writing detailed scientific study reports including appropriate analysis of data to meet government requirements. Requires a Ph.D. in biological or biotechnology subject area and a minimum of 2-3 years appropriate research/supervisory experience in crop improvement or crop protection or MS with additional five years of appropriate experience.

REGULATORY AFFAIRS MANAGER-South America (Ad Code #99117C) - Responsibilities include developing strategies for field testing and commercial approval of genetically modified products in South American markets, developing complex product safety data packages, compiling registration applications that conform to applicable South American laws and prosecuting those applications. MS in biological or chemical science subject with 3 years experience or Ph.D. in biological or chemical science required. Experience in biotechnology and crop improvement and experience with international regulatory systems is preferred. Candidates without appropriate regulatory experience may be required to complete one year of training in the Des Moines, IA area before locating to Argentina.

REGULATORY AFFAIRS ASSOCIATE (Ad Code #99118C) -Responsibilities include coordinating the activities necessary to prepare applications to conduct field trials, both in North America and elsewhere Pioneer does research. This includes collecting technical information, drafting and submitting permit applications for proposed field trials, movements and importations of plants developed through biotechnology. Requires BS and four years of research experience or MS and two years of research experience.

For consideration, submit a scannable resume and cover letter to: Employment Services - (Ad Code #See Above) P.O. Box 14454, Des Moines, IA 50306-3454 or e-mail: jobs@phibred.com. Visit www.pioneer.com for more information on scannable resumes and employment opportunities.

Equal Opportunity Employer





THE SALK INSTITUTE

A postdoctoral position is available in Dr. Paul A. Slesinger's laboratory at the Salk We utilize a combination of Institute. electrophysiologial, biochemical, and molecular genetic techniques to study the structure and function of ion channels. The current project will examine the molecular mechanism underlying Gbeta/gamma activation of G protein-gated inwardly rectifying potassium (GIRK) channels using two-electrode voltage-clamp and the patchclamp technique. Candidates should possess a Ph.D. or MD/Ph.D., some experience with electrophysiology, and a desire to learn molecular biological or biochemical techniques. Please send CV, names of 3 references, and a brief statement of research objectives to:

The Salk Institute for Biological Studies Attn: Dr. Paul A. Slesinger 10010 N. Torrey Pines Road La Jolla, CA 92037 slesinger@salk.edu.

www.salk.edu The Salk Institute is an Equal Opportunity Employer

PROTEIN PURIFICATION SPECIALIST

Molecular Biology Enzymes

We have an immediate opening for a protein purification specialist with experience in molecular biology enzymes (polymerases) and their applications. Ph.D. with postdoctoral experience preferred. Salary Open; medical benefits and relocation expenses paid.

Resume with references to: Don R. McCarty Midland Certified Reagent Co.

3112-A West Cuthbert Avenue Midland, Texas 79701



ASSISTANT/ASSOCIATE PROFESSOR (MEDICAL PHYSIOLOGIST) Center for Medical Education Ball State University Muncie, Indiana

The Muncie Center for Medical Education, a regional center for the Indiana University School of Medicine located on the Ball State University campus, invites applications for a tenure-track fiscal year position at the level of Assistant or Associate Professor available January 10, 2000. Responsibilities include: establishing an independent research program; participation in a team taught physiology course for medical students. Minimum qualifications: Ph.D. in Physiol ogy; post doctoral experience. Salary is negotiable and is commensurate with expe rience. Start up funds are available. Send letter of application listing current research activities and teaching experience, curriculum vitae, and the names and telephone numbers of three references to: Dr. Douglas A. Triplett, Director, Center for Medical Education, Ball State University, Muncie, IN 47306. Original transcripts will be required before interview. Applications must be postmarked by June 15, 1999. (www.bsu.edu)

Ball State University is an equal opportunity, affirmative action employer and is strongly and actively committed to diversity within its community.

Be prepared to make a difference like you've never imagined.

elping to maximize the impact of human discovery and endeavor defines our farreaching role at The National Academies. We serve as the nation's source of objective, independent research and principled expertise that contributes to national policymaking in matters of science, technology, and engineering. Currently, we have the following opportunity available to join our talented staff in **Washington DC**.

Staff Officer Board on Biology

The National Academies' Board on Biology is seeking a Staff Officer to develop, direct, and provide intellectual oversight for new studies on research opportunities on the origins and evolution of life and issues in the education of biologists, as well as perform other tasks to develop the program of the Board on Biology.

Responsibilities include: developing candidates for appointment to expert committees; coordinating, planning, and preparing for committee meetings; developing scientific data; writing scientific material for committee use and overseeing the preparation of final reports; and handling all related administrative and budgetary matters. Candidates should have a Ph.D. or equivalent and at least 1 year of professional experience in molecular or cellular biology or biotechnology. Familiarity with biology education issues and trends is also preferred. Other requirements include: ability to analyze, integrate, and select data for use by committees; effective written and verbal communication skills; and strong organizational and administrative skills for handling multiple scientific projects.

For consideration, please send curriculum vitae and recent publication or writing sample in confidence to: The National Academies Commission on Life Sciences NAS 343 (MU) 2101 Constitution Avenue, NW Washington, DC 20418 EOE. M/F/D/V.

101, M/170/ V.

WWW.Nas.edu NATIONAL RESEARCH COUNCIL NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING INSTITUTE OF MEDICINE

Experts Providing Answers

Post Doctoral Fellows

Be at the forefront of drug development research with DuPont Pharmaceuticals Company. We are focused on meeting unmet medical needs through the discovery and development of innovative compounds leading to novel pharmaceuticals. We currently have the following opportunities available at our facilities in Wilmington, DE:

Two (2) Postdoctoral Fellow positions are available within the Virology Group, in the HIV area: one Fellow will investigate possible in vitro surrogates for lipodystrophy, including exploring the effects of antiretrovirals on adipogenesis, lipolysis, and protein and gene expression levels. The second Fellow will investigate new methods for the detection of low level virus populations in different cell culture backgrounds, using reporter cell assays, real-time PCR and other techniques. A Ph.D. in Virology, Biochemistry or Molecular Biology, along with basic knowledge of molecular biology and cell culture are required. Previous expertise in Biosafety Level 3 procedures and handling of HIV is highly desirable.

DuPont Pharmaceuticals Company can offer you an excellent compensation and benefits package. To be considered, please forward your resume to: DuPont Pharmaceuticals Company, Human Resources-(SD-SEV), E400/2413, P.O. Box 80400, Wilmington, DE 19880-0400. An equal opportunity employer, M/F/D/V.

QUPOND.

DuPont Pharmaceuticals Company

STAFF SCIENTIST

The National Institute on Aging (a NIH institute) is looking for a Staff Scientist to run a Mass Spectrometry Facility for proteomics studies, including mapping proteins by HPLC, analyzing peptides by MS, and computer-assisted data processing. The incumbent serves as independent research biologist with responsibility for providing mass spectrometric analysis of proteins along with related protein fractionation and protein analysis support for senior investigators in the Laboratory of Genetics, NIA Intramural Research Program, (www.grc.nia.nih.gov/branches/lg/ lg.htm) and collaborating research scientists outside of the NIH. The ideal candidate will be a Ph.D. with at least 3 years of experience in LC/MS and associated analytical protein techniques and computer-assisted analysis of results and experience in running a facility. Starting salary is commensurate with qualifications and experience. How to Apply: Applicants should send

riow to Appry. Applicants should schu curriculum vitae, bibliography, and three letters of reference (two from noncollaborators) to: National Institute on Aging, Gerontology Research Center, Attn: Karen L. Maben, Box 26, Vacancy #AG-99-17, 5600 Nathan Shock Drive, Baltimore, Maryland 21224.

Applications must be postmarked by May 9, 1999.

The NIH is an equal opportunity employer.

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

POSITIONS OPEN

RETINA RESEARCH FOUNDATION ALICE R. MCPHERSON CHAIR IN OPHTHALMOLOGY Cullen Eye Institute Baylor College of Medicine Houston, Texas

The Cullen Eye Institute and Department of Ophthalmology at Baylor College of Medicine invite nominations and applications for the recently established Retina Research Foundation Alice R. McPherson Endowed Chair in Ophthalmology. The candidate must be an established scientist at the rank of Professor, have a Ph.D. degree, and an extramurally funded research program. The successful candidate should have an outstanding research record in the area of ophthalmic molecular biology including, but not limited to, molecular and genetic mechanisms underlying hereditary eye diseases, gene mapping/positional cloning, animal models, gene therapy, or genetic epidemiology. The appointee will be provided ample basic laboratory and support space in the Cullen Eye Institute: start-up funds for equipment, supplies, and laboratory personnel; access to core research facilities and positions in the departmental training grant; and a joint appointment(s) in a basic science department(s) at Baylor College of Medicine. Applicants should send curriculum vitae, a description of research interests, and contact information for three references to:

Dr. Dan B. Jones Cullen Eye Institute, NC-205 Baylor College of Medicine One Baylor Plaza Houston, TX 77030

Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.

CHAIRPERSON DEPARTMENT OF PATHOLOGY

Case Western Reserve University is seeking a Chair of the Department of Pathology. The Chair serves as the academic leader of the Case Western Reserve University Department of Pathology. The Department has a long-standing tradition of excellence in training and investigation and is currently ranked third in NIH funding nationally. The faculty have broad expertise in molecular biology and virology, cell biology, and immunology. The candidate must demonstrate academic leadership and possess a proven track record in basic research.

Interested candidates should submit their curriculum vitae no later than April 15, 1999, to: Richard A. Walsh, M.D., Professor and Chair of Medicine, Search Committee Chair, University Hospitals, 11100 Euclid Avenue, Cleveland, OH 44106-5029.

Case Western Reserve University is an Affirmative Action/ Equal Opportunity Employer, Applications from qualified women and minorities are encouraged.

Baylor College of Medicine seeks nominations and applications for the position of **DIRECTOR** of the Center for Brain and Behavior. Generous resources have been donated to establish the Center, which will integrate a basic research focus on mechanisms underlying human behavior and cognition with a clinical focus on four categories of behavioral disease: mood disorders, disorders of learning and memory, psychotic disorders, and addictive behaviors. Successful candidates should be of nationally renowned scholarship in one of the four areas mentioned above and have a proven talent for leadership. The Director will recruit outstanding researchers to the Center and develop cutting-edge, interdisciplinary research programs and a state-of-the-art functional imaging center. Letters of nominations or curriculum vitae should be sent by June 30, 1999, to: Huda Y. Zoghbi, M.D., Professor, Department of Molecular and Human Genetics, Chair, Brain and Behavior Search Committee, Baylor College of Medicine, MS 225, One Baylor Plaza, Houston, TX 77030. E-mail: hzoghbi@ bcm.tmc.edu. Names, addresses, and telephone numbers of at least three references should be included. Baylor College of Medicine is an Equal Opportunity/ Affirmative Action/Equal Access Employer.

POSITIONS OPEN

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE

The Department of Physiology at West Virginia University invites nominations and applications for a tenure-track ASSISTANT PROFESSOR position to begin in the fall of 1999. We seek an individual with research interests in the neural control of anterior pituitary function. The new faculty member will be expected to establish an independent research program, collaborate with the Department Chair in reproductive physiology research, and contribute to the teaching and service missions of the Department. Applicants should have a Ph.D. or M.D. degree, postdoctoral experience, a potential to attract extramural funds, and teaching experience. Competitive salary and start-up fund will be provided. The initial review of applications will begin April 30, 1999. Applicants should send curriculum vitae, a statement of research interests, and future plans, and a list of at least three references to: Dr. Paul Brown, Chair of Search Committee, Department of Physiology, West Virginia University Health Sciences Center, P.O. Box 229, Morgantown, WV 26506-2992

West Virginia University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR. Plant molecular genetics. The University of Connecticut Department of Plant Science seeks applicants with a Ph.D. for a tenure-track research (60 percent) and teaching (40 percent, including an undergraduate course in plant breeding/genetics) position. The successful candidate will demonstrate the ability to develop an externally funded research program utilizing the tools of molecular biology, biotechnology, and/or functional genomics. An interest in improvement of turfgrass, nursery crops, woody plants, or floriculture crops is desirable. To apply (June 1, 1999, deadline, or until a suitable candidate is identified), send a letter highlighting research/teaching goals, curriculum vitae, and the names of three references to: Dr. C. Auer, Department of Plant Science, U-67, University of Connecticut, Storrs, CT 06269. E-mail: cauer@ canrl.cag.uconn.edu. Applications from underrepresented groups, including minorities, women, and people with disability, are encouraged.

UNIVERSITY OF FLORIDA

Seeks an ASSISTANT PROFESSOR in the Department of Medicine, Division of Hematology/Oncology for a full-time, tenure-track position. M.D. or M.D.-Ph.D., Board-eligible/Board-certified in both hematology and oncology. Duties would include but not be limited to attending responsibilities for both inpatient and outpatient hematology/oncology divided between the VAMS and Shands Hospitals. Applicant should have a strong commitment to an academic career with responsibilities for teaching, patient care, and clinical research endeavors. Salary and benefits commensurate with experience. Recruiting deadline: April 22, 1999. Anticipated starting date: July 1, 1999. Interested applicants should submit curriculum vitae and a cover letter to: University of Florida, James W. Lynch, Jr., M.D., FACP, Associate Pro-fessor, Box 100277, JHMHC, Gainesville, FL 32610. Affirmative Action/Equal Opportunity Employer.

ASSOCIATE PROFESSOR or PROFESSOR of pharmacology or clinical pharmacology (tenured and state-funded). Experience directing a team-taught medical pharmacology or clinical pharmacology course desirable. A strong publication record, and potential for acquiring extramural funds is expected. A curriculum vitae along with the names and addresses of three references should be submitted to: John W. Dailey, Ph.D., Department of Biomedical and Therapeutic Sciences, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, IL 61656. For additional information contact e-mail: jwd@uic.edu. The University of Illinois is an Equal Opportunity Employer and welcomes applications from minority and female candidates.

POSITIONS OPEN

CANCER CENTER AND DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY University of Minnesota

A tenure-track position at the rank of ASSISTANT PROFESSOR is available approximately July 1, 1999. Candidates should have exceptional research accomplishments in molecular mechanisms of mouse or human tumor invasion, angiogenesis/inflammation, or cell growth/programmed cell death or nuclear matrix. Applicants must have Ph.D. and/or M.D. and at least three years of postdoctoral experience in an area related to cancer cell biology and metastasis. The successful candidate will hold joint appointments in both the Cancer Center and the Department of Laboratory Medicine and Pathology and will be expected to develop high-quality, independent federally funded research programs that integrate into the combined research and teaching missions of both units.

Applications will be received through May 15, 1999. Applicants should send their curriculum vitae, names of three references, and a brief synopsis of research activities to:

Assistant Professor Search (Cancer Center and Laboratory Medicine and Pathology) c/o Marilyn Green Department of Laboratory Medicine and Pathology 420 Delaware Street S.E. Minneapolis, MN 55455

The University of Minnesota is an Equal Opportunity Educator and Employer.

FACULTY POSITION UNIVERSITY OF WISCONSIN–MADISON Gene Regulation/Intracellular Signaling

The Department of Comparative Biosciences, School of Veterinary Medicine invites applications for a tenure-track faculty position (ASSISTANT or AS-SOCIATE PROFESSOR) in cell/molecular biology with emphasis on gene regulation/intracellular signaling. Qualifications include a Ph.D., postdoctoral experience, ability to develop and sustain an extramurally funded research program, and a commitment to excellence in teaching. Preference will be given to candidates with research interests that complement existing departmental strengths. Teaching responsibilities include participation in veterinary medical and graduate education. To apply, send a curriculum vitae, brief statements of research interests/goals and teaching experience/philosophies, and three letters of reference to: Gordon S. Mitchell, Chair, Department of Comparative Biosciences, University of Wisconsin, 2015 Linden Drive West, Madison, WI 53706. To assure full consideration, apply by June I, 1999. For additional information, see website: http://www.vetmed.wisc.edu/ cbs/. Equal Opportunity/Affirmative Action Employer.

Susquehanna University. VISITING ASSIST-ANT PROFESSOR in geological and environmental science, one-year position, beginning in August 1999. Demonstrated success in undergraduate teaching is essential. Teaching responsibilities include courses in resource and water management, land use planning, environmental risk analysis, air quality, and environmental laws and regulations. Commitment to fostering independent student research is required. Ph.D. with teaching experience strongly preferred; A.B.D. considered. Located in the scenic Susquehanna Valley, one hour north of Harrisburg, one hour east of State College, and three hours from New York, Philadelphia, or Washington, D.C. (see website: www.susqu.edu). Send curriculum vitae, statement of teaching philosophy, copies of graduate transcripts, and three letters of reference to: Dawn Tracy, Chair, Search of Committee, Department of Geological and Environmental Science, Susquehanna University, Selinsgrove, PA 17870. Review of applications begins April 23, 1999, and will continue until the position is filled. Affirmative Action/Equal Opportunity Employer. Applications from women and persons of color encouraged.

SYLVESTER Comprehensive Cancer Center

University of Miami Hospital and Clinics

Announcement of a Faculty Position In Retrovirology

The Department of Microbiology and Immunology and the Sylvester Comprehensive Cancer Center at the University of Miami invite applications for a tenure-track faculty position at the Assistant or Associate Professor level for investigators with research interests in the development of a program in HIV-related malignancies. All applicants who wish to be considered for the position at the level of Associate Professor should have an established, funded research program. Special consideration will be given to individuals who are particularly interested in oncogenic mechanisms of herpes viruses, transcriptional regulation, and/or signal transduction. The chief criteria for candidates are proven excellence in research and the potential to develop an externally funded research program.

This individual will work closely with researchers and clinicians at the Sylvester Cancer Center's HIV-related malignancies program.

Interested applicants should send a current Curriculum Vitae, a statement describing research achievement and future research plans, names and addresses of three references to:

Dr. William Harrington, Jr. c/o Desiree Uptgrow Sylvester Comprehensive Cancer Center University of Miami School of Medicine P.O. Box 019132 (M-877) Miami, FL 33101

The University of Miami is an Equal Opportunity / Affirmative Action Employer

St.Jude Children's **Research Hospital** ALSAC . Danny Thomas, Founder POSTDOCTORAL POSITION A Postdoctoral position is available to participate in an established research program addressing the regulation of key enzymes in fatty acid and membrane phospholipid synthesis. Candidates with a recent Ph.D. degree interested in utilizing contemporary molecular biology, genetics, structural biology and biochemistry to problems related to gene expression and the regulation of membrane phospholipid biogenesis in bacteria are encouraged to apply. The research focuses on understanding enzyme structure/function and the biochemical mechanism of action of novel antibacterial drugs that target lipid biosynthesis. Applicants should submit their curriculum vitae, reprints and names of three references to: Dr. Charles O. Rock, Biochemistry Department, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis TN 38105-2794. E-mail: charles.rock@stjude.org. An Equal Opportunity/Affirmative Action Employer.

Share Your Passion For Life

When you work at Dana-Farber Cancer Institute, you're working to save lives.Vital to the search for a cure, each position offers a unique challenge. A challenge to share your passion for life. The following opportunity is currently available:

Research Scientist

Research Scientist needed to work collaboratively with principal investigator and post-doctoral associates in an exciting area of cancer research. Specific projects pursue the structural and biochemical basis of programmed cell death in mammals. Principal approach will utilize protein biochemistry to define the biophysical properties and three dimensional structure of cell death regulators. Prior experience with protein expression and purification is highly desirable. Interested candidates please forward resume to:

Dana-Farber Cancer Institute, Attention: Dr. Stanley J. Korsmeyer, Human Resources, 44 Binney Street, Boston, MA 02115. Fax: (617) 632-6401 or E-mail: stanley_korsmeyer@dfci.harvard.edu

Please visit our web site at www.harvard.edu. We are an equal opportunity employer.



STAFF SCIENTIST

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Laboratory of Molecular Biology is searching for a Staff Scientist in the area of Physical Chemistry of Macromolecules, with a special interest in the chemistry of protein-DNA interactions, DNA structure and protein conformation in solu tion, and a very strong background in instrumentation and use of computers The candidate should have a doctoral degree in the chemical or biological sciences, with emphasis on physical chemistry of macromolecules. He or she should have extensive experience in the detailed and routine operation and maintenance of the XLA analytical ultracentrifuge for both equilibrium and sedimentation velocity experiments, the Brookhaven Instruments (or equivalent) light scattering apparatus for both Rayleigh scattering analysis and photon correlation spectroscopy. The candidate should also be familiar with instrumentation for MALDI-TOF mass spectroscopy, and fluorescence spectroscopy (fluorescence polarization, fluorescence resonance energy transfer). In each case the candidate should have a strong background in the theoretical basis of the measurements, and be capable of carrying out complete and independent analy sis of data collected with each instrument. This should include a familiarity with hydrodynamic theory and the theory of light scattering. In addition the candidate must be familiar with the methodology of molecular biology, including protein and nucleic acid purification, electrophoretic gel analysis, and DNA cloning, sequencing and synthesis. The candidate will also have the responsibility of instructing others in the use of apparatus under the candidate's supervision and of seeing that instruments are maintained in operating condition.

The successful candidate will participate in collaborative efforts with members of the Laboratory of Molecular Biology, NIDDK, to apply physical methods to the investigation of complex biological systems, including solution studies of protein-DNA complexes involved in DNA recombination and in regulation of gene expression, as well as studies of higher order chromatin structure in solution. Salary will be in the range \$50,000 to \$70,000 depending upon previous experience and education. Applicants are invited to send a curriculum vitae, bibliography, brief description of previous experience in relevant research programs (<1000 words), and names and addresses of three references to Ms. Barbara Hall, Building 5, Room 324, National Institutes of Health, Bethesda MD, 20892-0560. Telephone: 301 402 4379 Fax: 301 496-0201. E-mail:BarbaraH(@intra.niddk.nih.gov

NATIONAL INSTITUTES OF HEALTH/NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES NIH is an Equal Opportunity Employer

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 years 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

POSITIONS OPEN

TENURE-TRACK PHARMACOLOGY POSITIONS—RANK OPEN CELL AND NEUROBIOLOGY DEPARTMENT University of Southern California School of Medicine

Two tenure-track positions in the Department of Cell and Neurobiology at the University of Southern California School of Medicine are available immediately. Applicants should have a Ph.D. or M.D. degree with an established, proven teaching record in medical school pharmacology. Academic rank is to be commensurate with qualifications and experience. The successful candidate will have an established vigorous, externally funded neuroscience-related research program and actively coordinate and participate in medical school and graduate education.

Applicants should send a curriculum vitae plus information addressing their research program, as well as a brief summary of their grant funding record; summary of teaching experience; copies of significant recent publications; and letters of reference from three members of the scientific community by April 30, 1999, to the Search Committee:

Dr. Cheryl M. Craft, Professor and Chair Department of Cell and Neurobiology University of Southern California School of Medicine 1333 San Pablo Street, BMT 401 Los Angeles, CA 90033 E-mail: ccraft@hsc.usc.edu Website: http://www.usc.edu/schools/ medicine/cnb

USC is an Equal Opportunity/Affirmative Action Employer

FACULTY POSITION MICROBIOLOGY/IMMUNOLOGY/ EPIDEMIOLOGY

The Department of Microbiology of the Chicago College of Osteopathic Medicine-Midwestern University seeks applications for a tenure-track position at the level of ASSISTANT PROFESSOR. The position is available for individuals specializing in either infectious disease epidemiology or host-parasite interactions. Preference will be given to individuals broadly trained in medical microbiology with teaching experience in a health care curriculum. Applicants must have a Ph.D. or equivalent, postdoctoral training, and a commitment to excellence in teaching and establishment of a rigorous research program capable of attracting extramural funding. Send curriculum vitae, names of at least three references, and a brief statement of teaching interests and philosophy and research plans to: Kyle H. Ramsey, Ph.D., Department of Microbiology, Chicago College of Osteopathic Medicine-Midwestern University, 555 31st Street, Downers Grove, IL 60515. E-mail: kramse@midwestern.edu; website: http://www. midwestern.edu.

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.

POSITIONS OPEN

ASSOCIATE PROFESSOR/PROFESSOR of marine science. University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (SFOS), Institute of Marine Science, and RESEARCH DI-RECTOR Alaska SeaLife Center (ASLC).

Responsibilities: SFOS invites applications from Marine Mammal Biologists to fill a dual position as Associate Professor or Professor of marine science and Research Director, ASLC. The faculty portion of the position involves student supervision (M.S. and Ph.D.), research supported with external funds, and University and professional service. The ASLC Research Director provides oversight of the scientific programs, interfaces with public education programs and represents ASLC externally. Qualifications: Earned Doctorate in marine biology or related field. Strong research and higher education background. Significant laboratory study experience in areas like medicine, physiology, biochemistry, and endocrinology, and/or in field operations that are applicable to work with captives. The incumbent's research program will be funded by external funds and therefore, a record of successful grantsmanship is critical. Familiarity with the U.S. Marine Mammal Protection Act is needed for cooperation with Alaskan management and rehabilitation agencies. The ASLC Research Director must be able to oversee diverse programs with marine invertebrates, fish, birds, and mammals. Oversight includes bringing broad-based research teams to ASLC; participation in the Animal Care and Use Committee; public relations; participation in interdepartmental program development and research staff supervision. Representing ASLC at external scientific, private, foundation agency meetings is required. Location: Based in Seward, Alaska. Salary: \$45,780 to \$80,000 per year plus benefits dependent on experience. Position is tenure-track in SFOS. Closing: May 15, 1999. Contact: Send professional résumé, a statement of background and scientific interest, and the names, addresses, e-mail addresses, and telephone numbers of five referees c/o: R. Miller, University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Fairbanks, AK 99775-7220. UA is an Affirmative 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 with UA is subject to public disclosure under the Alaska Public Records Act. This is a bargaining union position.

ASSISTANT/ASSOCIATE PROFESSOR PATHOGENIC BACTERIOLOGY

The Department of Microbiology and Immunology at the East Carolina University School of Medicine invites applications for a tenure-track faculty position at the Assistant Professor or Associate Professor level. An individual utilizing modern molecular approaches in the general area of bacterial pathogenesis related to human health and disease is sought. Major responsibilities will include establishment and direction of an independent research program and participation in teaching of medical and graduate courses. Salary and rank will be commensurate with qualifications. Appointment at the Associate Professor level requires a strong record of continuous research funding including current extramural support and evidence of leadership in teaching and service. The Department has 13 tenure-track faculty, an active Doctoral studies program, and is fully equipped with advanced facilities for bacteriology, molecular biology, genetics, virology, immunology, and animal research. Applicants should provide curriculum vitae, a letter describing research and teaching goals, and names and complete addresses of three references by mail to: Bacteriology Search Committee, Department of Microbiology and Immunology, School of Medicine, East Caro lina University, Greenville, NC 27858-4354. East Carolina University is an Equal Opportunity/Affir-

East Carolina University is an Equal Opportunity/Affirmative Action University. Accommodates individuals with disability. Applicants must comply with the Immigration Reform and Control Act.

POSITIONS OPEN

ASSISTANT PROFESSOR FUNCTIONAL GENOMICS

The Child Health Research Institute in London, Ontario, Canada wishes to recruit a scientist whose research is directed toward the identification and functional analysis of genes involved in embryonic, fetal, or newborn development. The Institute is especially interested in candidates using genomic manipulation techniques to study organogenesis in animal models with implications for child health and development. The successful applicant will be offered an academic appointment at the Assistant Professor level, non-tenure-track, in the Department of Paediatrics at The University of Western Ontario with a cross appointment to one or more basic science departments at the University. The initial appointment will be for a three-year period with the incumbent also being expected to apply for independent salary support from external funding agencies. A generous start-up package based on the candidate's qualifications will also be offered. Minimum requirements are a Doctoral degree in developmental or reproductive biology or physiology and two years of postdoctoral training.

Applicants should send a curriculum vitae, description of research interests, sample publications, and the names and contact information of three referees by May 30, 1999, to: Dr. Victor Han, Director, Child Health Research Institute, 800 Commissioners Road East, London, Ontario N6C 2V5 Canada.

Positions are subject to budget approval. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The University of Western Ontario is committed to Employment Equity, welcomes diversity in the workplace, and encourages applications from all qualified individuals including women, members of visible minorities, aborginal persons, and persons with disability.

ASSISTANT PROFESSOR HOWARD UNIVERSITY COLLEGE OF MEDICINE Department of Pharmacology

The Department of Pharmacology at Howard University College of Medicine, Washington, D.C. invites applications for a tenure-track position at the Assistant Professor level. Available immediately. Candidates should possess the Ph.D. (preferably in pharmacology or toxicology) and/or M.D. degree(s), with postdoctoral research experience. Candidates are expected to develop an independent research program and to participate in the professional and graduate teaching activities of the department. The appointee is encouraged to interact with the Department of Pharmacology faculty who have active research programs in autonomic, cancer chemotherapy, cardiovascular, behavioral and neuropharmacology, or alcohol pharmacology. Please submit curriculum vitae, a description of research activities, future plans, and the names of three references to: Dr. Robert E. Taylor, Chair-man, Department of Pharmacology, Howard University College of Medicine, 520 W Street N.W., Suite 3408, Washington, DC 20059. Howard University is an Equal Employment Opportunity/ Affirmative Action Employer. Applications from minority can-didates and women are strongly encouraged.

The University of Florida seeks six (6) CLINICAL ASSISTANT PROFESSORS for the Department of Medicine, Division of Internal Medicine. 1.00 FTE, non-tenure-track position. M.D. degree, Board-eligible/Board-certified in internal medicine. The responsibilities will consist of treating patients on an outpatient and inpatient basis. Teaching medical students and Residents coinciding with the care of those patients. No research responsibilities. Salary and benefits commensurate with experience. Please reply with curriculum vitae to: Heather Harrell, M.D., Clinical Assistant Professor, Department of Medicine, Division of Internal Medicine, Box 100277, JHMHC, Gainesville, FL 32610. Recruiting deadline: April 22, 1999. Anticipated start date: July 1, 1999. An Equal Opportunity/Affirmative Action Employer.

GLOBAL OPPORTUNITIES

medicine

invites applications for the post of

Editor of Nature Medicine

Nature America, the publisher of Nature Genetics, Nature Structural Biology, Nature Medicine, Nature Biotechnology and Nature Neuroscience, is seeking a successor to Adrian Ivinson, who is leaving Nature Medicine to take up the position of Publisher within the group. We are looking for a successor who will continue to develop Nature Medicine and build upon its reputation as the leading international biomedical research journal.

The Editor is responsible for the editorial content of the title, working closely with an experienced team based in our New York office, and with colleagues in our London, Tokyo and other offices. Regular contact and communication with the international biomedical research community is central to the role, to ensure that the journal continues to meet the needs of its diverse readership. Planning and managing editorial resources, as part of the senior management team of the company, is an integral part of this job.

The ideal candidate will have a Ph.D. in a relevant field, exceptional scientific judgement, a broadbased knowledge and understanding of the biomedical research community and strong leadership and management skills. Experience in the communication of science would be an advantage.

Applications, which should include a curriculum vitae, a succinct (up to 1,000 words) assessment of the strengths and weaknesses of the *Nature Medicine*, and a concise cover letter explaining your interest in this job, should be sent to: Dr. Adrian J. Ivinson, Nature America Inc., 345 Park Avenue South, New York, NY 10010, USA. Fax 212.696.9009, to arrive before April 23rd, 1999. Please quote NMS01.



Nature America, Inc. 345 Park Ave. South New York, NY 10010



UNITED ARAB EMIRATES UNIVERSITY FACULTY OF MEDICINE AND HEALTH SCIENCES (FMHS)

Exciting opportunities at the FMHS for full-time academic staff as Assistant/Associate/Full Professor or "Teacher" category

Established in 1986 and recently moved into a completely equipped new building, the FMHS provides an integrated problem-oriented undergraduate medical curriculum with English as the medium of instruction. Appointees will join a dynamic team of medical educators, researchers, and support staff who maintain academic balance in medical education, basic science and clinical research, clinical care, and community and university service.

Basic requirements for appointment in Departments of ANATOMY, BIOCHEMISTRY, MEDICAL EDUCATION, MICROBIOLOGY, PATHOLOGY, PHARMACOLOGY, and PHYSIOLOGY: PhD or MD obtained by research, experience teaching medical students, and research productivity. Basic requirements for appointment in COMMUNITY MEDICINE, FAMILY MEDICINE, INTERNAL MEDICINE, **OBSTETRICS & GYNECOLOGY, PEDIATRICS,** PSYCHIATRY, RADIOLOGY and SURGERY: MD or MBBS followed by well-supervised advanced training, higher professional recognition, experience teaching medical students and advanced trainees, research productivity, and understanding of GME accreditation and membership/fellowship/certification in North America, Australia, Europe, and by the Arab Board. Appointees in Basic Science & Clinical Departments will be familiar with USMLE and MCCEE.

The UAE is an open and tolerant society and clearly one of the most attractive places to live and work in the Middle East.

Faculty receive tax-free salary, generous leave, and support for accommodation/furnishings, annual air fares, educational assistance for up to three children, and international conferences.

Further information may be obtained from the web site at http://www.uaeu.ac.ae or Chair of the respective department by tel +971-3-672000 or fax +971-3-672001.

Applications should include full CV and publication list, names/addresses/fax of five referees, and letter indicating position sought, depth of interest, experience, and suitability for the post sent to:

The Dean (c/o Mr C. P. Nair) Faculty of Medicine and Health Sciences United Arab Emirates University P O Box 17666, Al Ain, United Arab Emirates

Applications closed 1 September 1999; previous applicants need not apply.

EDINBORO UNIVERSITY OF PENNSYLVANIA

Biology and health services. Tenure-track ASSIST-ANT PROFESSORS. Position #020-0846: Teach ecology; environmental science for non-majors; courses in area of expertise, plus develop undergraduate/graduate research program in ecology. Teach-ing experience and Ph.D. in biology required. Position #020-0847: Teach courses for biology majors, general education, and allied health, with expertise in developmental biology. Successful candidate expected to develop research program involving undergraduate and M.S. degree students. Teaching experience and Ph.D. in biology required. Deadline: May 14, 1999. Finalists, in addition to the aforementioned requirements, minimally must be able to communicate well and perform well in an interview. May be assigned to perform work at off-campus sites and/or provide instruction through distance education. Submit letter of application specifying position #, résumé, transcripts, and names/addresses/telephone numbers of three current references to: Dr. Eric Randall, Dean of Science, Management, and Technologies, Department SC, Edinboro University of Pennsylvania, Edinboro, PA 16444. Visit our website: http://www.edinboro.edu. Affirmative Action/Equal Opportunity Employer/Minorities/Females/Veterans/Disabled.

ANATOMY ASSOCIATE

The Department of Anatomy and Cell Biology at The University of Iowa seeks an experienced **TEACHER** for its human gross anatomy program. The successful candidate will have a Ph.D., M.D., or equivalent and will participate in team-taught courses for medical, dental, and graduate students. Experience in teaching histology, gross anatomy, and interest in innovative teaching methods is desired. Appointment is on an annual basis for up to three years. Opportunity exists for continuation of scholarly activity, either in the candidate's area of research or in development of teaching methodology or curriculum design.

Send curriculum vitae, bibliography, a brief statement of teaching and research interests/experience, and the names of three references to:

Chair, Faculty Recruitment Committee Department of Anatomy and Cell Biology 1-100 BSB The University of Iowa Iowa City, IA 52242

The University of Iowa is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

The Department of Biopharmaceutical Sciences, in conjunction with the Program in Human Genetics, invites applications for a tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level in the field of pharmacogenomics, beginning fall 1999. Individuals working in genetics or genomics and with an interest in using genetic methods to study pharmacologic problems will be considered. Applicants should have a Ph.D., M.D., or advanced degree and will be expected to establish a dynamic research program and be a top-quality teacher in graduate and professional school courses. Send a curriculum vitae, three letters of reference, a summary of current research, and a concise outline of future research by April 15, 1999, to:

Pharmacogenomics Search Committee School of Pharmacy Department of Biopharmaceutical Sciences Box 0446 University of California San Francisco, CA 94143-0446

UCSF is an Affirmative Action/Equal Opportunity Employer. The University undertakes Affirmative Action to assure Equal Employment Opportunity for undentilized minorities and women, for persons with disability, and for Vietnam-era veterans and special disabled veterans.

TENURE-TRACK FACULTY POSITION REPRODUCTIVE BIOLOGY

ASSISTANT/ASSOCIATE PROFESSOR. Position No. 83463, I3/I4, Department of Anatomy and Reproductive Biology, University of Hawaii at Manoa, John A. Burns School of Medicine, general funds, annually renewable depending on performance and/or funding, full-time, 11-month, permanent, tenure-track, to begin approximately July 1999, subject to position clearance and availability of funds. Duties: Perform molecular/biochemical procedures in one or more of the following areas: (1) embryonic stem-cell biology and cell differentiation, (2) animal cloning and gene manipulation, or (3) germ cell/ embryonic cell differentiation and manipulation. Minimum qualifications: Doctorate in biological science. (Assistant): At least two years of postdoctoral experience with publications and some teaching experience. (Associate): Same as Assistant plus four years at the rank of Assistant Professor or equivalent: scholarly achievement, publications, proficiency in teaching, and competence as judged by peers active in the same field at other major research universities. Desirable qualifications: Evidence of ability to apply skills and knowledge in cell biology, molecular biology, genetics, embryology, and reproductive biology. Experience in micromanipulation of gametes and/or embryos. Minimum annual salary: Assistant: \$40,524; Associate: \$51,264. To apply: send a one-page letter explaining your reasons for applying and state your longterm goals. Include curriculum vitae, publications (with reprints if possible), and three letters of recom-mendation to be sent directly to: **Dr. Ryuzo Yanagi**machi, Department of Anatomy and Reproductive Biology, University of Hawaii School of Medicine, Honolulu, HI 96822. FAX: 808-956-5474; e-mail: yana@hawaii.edu. Closing date: Application materials must be received by May 10, 1999. An Equal Employment Opportunity/Affirmative Action Institution.

ASSISTANT PROFESSOR NEUROBIOLOGY/ANATOMY

College Misericordia Biology Department invites you to apply for a full-time (10-month) tenure-track position to begin August 1999. Liberal arts-based with a strong commitment to undergraduate teaching excellence, College Misericordia has a rural setting and is located in the Pocona Northeast Region of Pennsylvania, approximately two and a half hours from Philadelphia and New York City.

Expertise in neurobiology and anatomy is required. Candidates with experience in a wide range of approaches to neurobiology will be considered, and candidates with experience with cellular, molecular, biochemical, or genetic approaches are especially encouraged to apply.

The successful candidate must hold a Ph.D. at the time of appointment and will be expected to teach courses in neurobiology and gross anatomy, as well as involve undergraduate students in research.

Candidates should submit a letter that addresses their commitment to diversity in teaching, scholarship, and/or service, a statement of teaching philosophy, a curriculum vitae, and three references to: Dr. Frank DiPino, Chair, Department of Biology, College Misericordia, 301 Lake Street, Dallas, PA 18612-1098. E-mail: fdipino@miseri.edu; Telephone: 570-674-6457. Affirmative Action/Equal Opportunity Employer.

TENURED or TENURE-TRACK FACULTY POSITION available in the Department of Physiology and Biophysics at Finch University of Health Sciences. Candidates must have a well-established record of research in cellular and molecular physiology and substantial current grant funding. Preference will be given to individuals who also have experience teaching in a medical school curriculum. Please send curriculum vitae and names of three references by June 1, 1999, to: Dr. Robert F. Rakowski, Professor and Chair, Department of Physiology and Biophysics, Finch University of Health Sciences /The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064. Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN

FACULTY POSITION IN OPHTHALMIC RESEARCH

The Department of Ophthalmology at Case Western Reserve University seeks an outstanding scientist at the ASSISTANT or ASSOCIATE PROFES-SOR level. Research focusing on the retina is especially desirable. The successful candidate is expected to maintain a funded and independent research program. The research environment is enhanced by available service laboratories in cell analysis, molecular biology, and transgenic animal technology that are supported by a NEI Core grant. Applicants should send curriculum vitae, statement of research interests, and three letters of reference to: Dr. T. Kern, Department of Ophthalmology, Case Western Reserve University Visual Science Research Center, 11100 Euclid Avenue, Cleveland, OH 44106-5068.

Case Western Reserve University is an Equal Opportunity/ Affirmative Action Employer.

The Department of Biochemistry and Biophysics at the University of Pennsylvania seeks a RESEARCH ASSISTANT PROFESSOR (non-tenure-track) who is a specialist in organic chemistry with experience in the chemistry of porphyrins and related compounds. Applicants should have three to four years of postdoctoral experience with current methods of synthetic organic chemistry and have thorough knowledge of porphyrin chemistry. Technical expertise in optical measurements of fluorescence and phosphorescence as well as knowledge of computer modeling is highly desirable. The successful applicant would be expected to synthesize novel functionalized porphyrins and related chemical structures as well as to determine the physicochemical properties of these compounds and their metal complexes. Candidates should submit their curriculum vitae and arrange to have three letters of reference sent to: Ruth Keris, Staff Assistant, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadel-phia, PA 19104-6059. The deadline for applications is May 14, 1999. The University is an Equal Opportunity/ Affirmative Action Employer.

PROJECT SCIENTIST MAMMALIAN GENOTYPING SERVICE

The Marshfield Medical Research Foundation seeks applications for a Doctorate-level Project Scientist within the NHLBI-funded Mammalian Genotyping Service headed by James Weber. The successful candidate will supervise 20 Technicians and will be responsible for development and incorporation of new polymorphism screening technology. This position is an outstanding stepping stone for those seeking careers in genomics. At least two years of postdoctoral research experience preferred. Send curriculum vitae and three reference letters to: Mary Treichel, Marshfield Clinic, 1000 North Oak Avenue, Marshfield, WI 54449. Telephone: 800-782-8581, ext. 75596; FAX: 715-389-4889; e-mail: treichem@ mfldclin.edu. Marshfield Clinic is an Equal Opportunity Employer/Minorities/Females/Disabled/Veterans.

FOREST PATHOLOGIST. Assistant Cooperative Extension Specialist, career-track, in the Division of Ecosystem Sciences, College of Natural Resources, University of California, Berkeley, available January 1, 2000. Required for appointment is a Ph.D. in forest pathology, plant pathology, entomology, forestry, or a related field. Preference will be given to candidates with working experience integrating forest pathology into sustainable forest management practices or forest conservation and restoration. Submit a letter of application highlighting research interests and outreach philosophy, accompanied by curriculum vitae, copies of transcripts, and names and addresses of three references to: Chair, Forest Pathology Specialist Search Committee, Ecosystem Sciences Division, 151 Hilgard Hall #3110, University of California, Berkeley, CA 94720-3110. Applications must be received by June 1, 1999. For more information and or a full position description, Telephone: 510-642-2210.

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

Postdoctoral Fellow Position Genetics and Clinical Services Branch

Postdoctoral Fellow is sought by the National Eye Institute (NEI), National Institutes of Health (NIH). The position is located in Bethesda, Maryland. Positions available for M.D. or Ph.D. with training in biochemistry, molecular genetics or clinical genetics to investigate inherited visual diseases. All applications should include the following: a statement of research interest; a career synopsis; a current curriculum vitae and bibliography; and the name and addresses of references. Salary based on education and experience beginning at \$30,000. A list of the requirements or additional information about the position may be obtained by contacting Ms. Wild at the address listed below. Applications should be sent to:

NIH, National Eye Institute Attention: Cheryl Wild Building 31, Room 6A18 31 Center Drive – MSC 2510 Bethesda, Maryland 20892-2510

Applicants with access to E-mail may transmit their materials to the following E-mail address: **CWild@nei.nih.gov** Application materials may be Faxed to (301) 496-3958 (Please limit Faxed materials to no more than 10 pages). Candidates must be either U.S. Citizens or Permanent Residents.

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 STA-TUS, DISABILITY, AGE, SEXUAL ORIENTATION, OR MEM-BERSHIP OR NON-MEMBERSHIP IN AN EMPLOYEE ORGA-NIZATION.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

NIH POSTDOCTORAL POSITIONS HIV Research

Entry Mechanisms, Env Interactions with Receptors & Coreceptors, Novel Treatment and Protection Strategies

1. Mechanisms of HIV entry. Following our initial discoveries of the major HIV coreceptors CXCR4 and CCR5 [Science (1996) 272:872; Science (1996) 272:1955], we identified coreceptor activity for other chemokine receptors and related orphan proteins [J.Exp.Med. (1997)185:2015; Nature (1997) 388:238; J.Biol.Chem. (1998) 273:23799; Ann.Rev.Immunol. (1999) 17:657]. We now seek to unravel the sequential protein-protein interactions and associated conformational changes by which HIV Env uses CD4 and coreceptor to induce membrane fusion and virus entry.

2. Novel HIV therapeutic and prevention strategies. Using our knowledge of Env interaction with target cell molecules, we are devising novel therapeutic and protective agents [Proc.Natl.Acad.Sci. USA (1998) 5:11511].

3. Identification of new viral receptors. Approaches previously developed to identify HIV receptors are being applied to other important pathogenic enveloped viruses.

Experimental approaches: molecular, genetic, immunochemical, and biophysical analyses of molecules involved in HIV entry; hybridoma technology to enhance novel vaccine strategies; in vitro systems and animal models to study novel anti-HIV agents; development of new functional cDNA library screening methods. Experience in molecular biology, protein chemistry, virology, immunology, or membrane biochemistry preferred. Send CV and names of three references to:

Edward A. Berger, Ph.D. Chief, Molecular Structure Section Laboratory of Viral Diseases, NIAID Bldg. 4, Rm. 236, National Institutes of Health Bethesda, MD 20892-0445 Fax: (301) 480-1147, Email: edward_berger@nih.gov

POSTDOCTORAL RESEARCH OPPORTUNITIES

Group A Streptococcus Pathogenesis and Tuberculosis Biology Laboratory of Microbial Structure and Function Rocky Mountain Laboratories

James M. Musser, M.D., Ph.D., Laboratory Chief

Postdoctoral positions are available beginning in July to study group A *Streptococcus* molecular pathogenesis. The following areas are being investigated: (1) molecular processes responsible for host tissue invasion and destruction, including the interaction of an extracellular streptococcal protease and human matrix metalloproteases, (2) molecular genetics of temporal variation in disease frequency and severity, especially infections caused by serotype M1 organisms. These investigations center on the role of a hypervariable extracellular protein that inhibits human complement function; 3) structure-function relation-ships and immunoprophylaxis studies pertaining to the streptococcal cysteine protease; (4) host genetics of susceptibility to infection.

Positions are also available to study several aspects of *Mycobacterium tuberculosis* biology, including (1) molecular genetics of drug resistance; (2) molecular basis of interstrain variation in host virulence, with special attention to naturally occurring clonal lines causing extrapulmonary infections; and (3) human genetics of susceptibility to infection.

The entry-level stipend range for these positions is \$27,500 - \$42,000.

The Rocky Mountain Laboratories is undergoing complete renovation. As part of this upgrade program, a new Biosafety Level 3 laboratory, animal care facility (including non-human primates), and research support facilities will be available. In addition, recruitment will soon begin for new principal investigators. RML is located in the scenic Bitterroot Valley in western Montana. There is ready access to a full array of outdoor recreational opportunities, including hiking, skiing, and fishing.

Send curriculum vitae, reprints, brief statement of career goals, and names, addresses, telephone numbers and email addresses of three (3) references to: James M. Musser, M.D., Ph.D. (jmusser@bcm.tmc.edu), Chief, Laboratory of Microbial Structure and Function, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 903 South 4th Street, Hamilton, Montana 59840.

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF MENTAL HEALTH Division of Mental Disorders, Behavioral Research and AIDS (DMDBA)

Division of Mental Disorders, Behavioral Research and AIDS (DMDBA), National Institute of Mental Health, invites applications for the following position in its Office of AIDS Research:

Biologist/Virologist, GS-12/13

The incumbent will serve as a Biologist/Virologist supporting a major research program, the goals of which are to further understanding of the cellular and molecular mechanisms underlying the CNS dysfunction associated with HIV infection, and the subsequent identification of potential therapeutic interventions to prevent or reverse the CNS dysfunction. Incumbent will analyze current research activities and program needs to expand research on HIV-associated motor/cognitive dysfunction.

Basic qualifications for the position include an M.D. or Ph.D. in Biology with some experience in molecular and cellular mechanisms underlying HIV effects. GS-12/13 Civil Service positions have a salary range from \$48,796 to \$82,481. Salaries include locality pay and the special salary for Medical Officers. Physicians may be eligible for a Physician's Comparability Allowance (PCA) between \$5,000 and \$10,000 a year. This position may also be filled through the Commissioned Corps.

The full text vacancy announcement is available via the World Wide Web: <u>http://www.nimh.nih.gov/orm/pmb/jobs.htm.</u> Interested candidates may contact **Ms. Malca Giblin, NIMH Personnel Management Branch, at (301) 443-9094.** Applications will be accepted if postmarked by April 30, 1999 and received within 5 working days.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

LABORATORY RESEARCH ASSOCIATE POSITION

The Maxine Dunitz Neurosurgical Institute at the Cedars-Sinai Medical Center, directed by Keith L. Black, M.D., is seeking a highly qualified individual to join a dynamic team of scientists and physicians developing immunotherapeutic regimens to combat malignant brain tumors in patients. The ideal candidate will share responsibility for preparing tumor vac-cines and analyzing patients' blood after immunization for multiple clinical trials. Duties include peptide isolation from cultured tumor cells; dendritic cell (DC) preparation and antigen pulsing; peripheral blood mononuclear cell (PBMC) isolation and analysis; quality control of all reagents; managing vaccine preparation for multiple patients. Minimal qualifications: three years of laboratory experience, including establishing and maintaining primary human cells in culture, experience in cell-based or gene-based human clinical trials, and cellular immunoassay develop ment required. Extensive experience in protein and nucleic acid preparation is strongly recommended. B.A. or M.A. with extensive work experience, or higher degree preferred. Forward curriculum vitae and support materials to: Maxine Dunitz Neurosurgical Institute, Immunology Section, c/o C. J. Wheeler, Ph.D., Cedars-Sinai Medical Center, 8635 West Third Street, Room 490 W, Los Angeles, CA 90048. Applications will be considered upon receipt.

ANATOMIST/ORGANISMIC BIOLOGIST. Simpson College invites applications for a tenure-track ASSISTANT PROFESSOR beginning August 1999. Ph.D. or near completion required. Strong commitment to excellence in undergraduate teaching, supervision of undergraduate research projects, and willingness to be involved in college/ student life. Teaching responsibilities include introductory course in biology of organisms, human anatomy with cadaver dissection, comparative anatomy, and possibly other courses in area of expertise. Simpson College, a private, selective, liberal arts college affiliated with the United Methodist Church, has a full-time enrollment of 1,300 and is located 12 miles south of Des Moines. Review of applications begins May 17, 1999, and continues until position is filled. Please send letter of application, curriculum vitae, transcripts, and three current letters of recommendation to: Dr. Joe Moody, Chair, Biology Department, Simpson College, 701 North C Street, Indianola, IA 50125. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

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.

BACTERIAL GENETICISTS. Two POST-DOCTORAL (or more senior) positions are available to sudy exciting newly discovered mutagenic pathways (see: *Mol. Microbiol.* 30:905–910, 1998) in a strong research environment. Expertise in bacterial genetics/molecular biology required. Please write: M. Zafri Humayun, Ph.D., Professor of Microbiology and Molecular Genetics, University of Medicine and Dentistry of New Jersey–New Jersey Medical School MSB F607, 185 South Orange Avenue, Newark, NJ 07103. E-mail: humayun@ umdnj.edu.

POSITIONS OPEN

SCIENTIFIC REVIEW ADMINISTRATOR Opening Date: April 5, 1999 Closing Date: May 3, 1999 Announcement Number: CA-99-1933 Interdisciplinary GS-12/13/14

The Grants Review Branch, Division of Extramural Activities of the National Cancer Institute (NCI), National Institutes of Health, is seeking an individual to join a multidisciplinary group of Scientific Review Administrators to manage the initial peer review of research grant applications submitted to the NCI. These activities are based in Rockville, Maryland, a suburb of Washington D.C., but some travel (site visits) will be involved. Candidates should have independent research experience in current methods of cancer research. Expertise in the molecular biology of cancer pathogenesis would be particularly desirable. Candidates should also be familiar with the NIH grant application, review, and support process. Candidates must be United States citizens. The salary range (includes locality pay) for the position is \$48,796 to \$89,142. To obtain information about the application process or documents required for consideration for this position, candidates may contact: The Na-tional Cancer Institute, Office of Human Resources and Consulting Branch, Telephone: 301-402-2789. To obtain a FAX of this information, Telephone: 1-800-728-5627 or 301-594-2953 and enter FAX ID#: 1881. Selection for this position will be based on merit, with no discrimination for nonmerit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. The NCI/NIH is an Equal Opportunity Employer.

ACADEMIC NEUROLOGIST with dementia expertise. The Department of Neurology, University of California, Davis, is seeking a Board-eligible/certified Neurologist to fill a faculty position in the Regular (tenure-track) Series. This position requires an individual with expertise in the study of Alzheimer's disease and related dementias. The individual will participate in the clinical and research programs of a federally funded Alzheimer's Disease Center, and will be expected to develop an independent research program investigating a clinical or basic aspect of dementia. Individuals must have proven ability or potential for developing an extramurally funded research program. The applicant must also have demonstrated competence in patient care and teaching of medical students and housestaff. A valid California medical license or eligibility for licensure in the State of California is required. The level of appointment is dependent on the applicant's qualifications. Interested applicants should send a curriculum vitae and the names and addresses of three references to: William Jagust, M.D., Professor and Chair, Department of Neurology, University of California, Davis Medical Center, Ambulatory Care Center, 4860 Y Street, Suite 3700, Sacramento, CA 95817. This position is open until filled but not later than December 31, 1999. The University of California is an Affirmative Action/ Equal Opportunity Employer.

RESEARCH ASSOCIATE. Available immediately, to work on development of a bioartificial pancreas composed of alginate-encapsulated insulin-secreting tissue in a planar immunobarrier chamber with *in situ* oxygen generation. Research is collabora-tive under the JDFI Center for Islet Transplantation at Harvard Medical School. Ph.D. in Chemical Engineering required, with strong publication record, substantial background in tissue engineering, and three or more years of postdoctoral experience in as many as possible of the following areas: aseptic technique; monolayer and 3-D 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 assessing metabolism and energetic state of cells in bioreactors. Send curriculum vitae and names and contact information of three references to: Dr. Clark K. Colton, Room 66-452, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139-4307.

POSITIONS OPEN

AQUATIC/FEED MICROBIOLOGIST

Responsibilities: Coordinate, develop, and implement research on the contribution and management of aquatic microorganisms within intensive shrimp farming systems in support of a five-year project that is funded by USDA/ARS. The successful candidate will be expected to undertake research activities so as to elucidate the contribution played by aquatic autotrophic and heterotrophic microorganisms within outdoor shrimp ponds in water/waste management and as a potential source of dietary nutrients for the farmed shrimp (Litopenaeus vannamei). The candidate would also be expected to conduct research on aspects related to the development of techniques for monitoring the microbial contamination and safety of feed ingredients and compound aquafeeds used within the animal feed manufacturing industry, as well as studying the potential role of microorganisms within the gastrointestinal tract of cultured aquatic animals. Qualifications: Ph.D. degree in microbiology, with proven postdoctoral research experience and publication record in aquatic and/or feed microbiology. Exniques, strong data handling, and writing skills is also required, and some knowledge in aquaculture and/or feed technology is desirable but not essential. Experience in or strong potential for obtaining compet-The Oceanic Institute, 41-202 Kalanianaole Highway, Waimanalo, HI 96795. Telephone: 808-259-3112; FAX: 808-259-5971; e-mail: atacon@ teligentmail.com; website: www.oceanicinstitute. org

RESEARCH POSITION

The Department of Obstetrics and Gynecology at Rush-Presbyterian-St. Luke's Medical Center invites applications for the position of **DIRECTOR** of the Gynecologic Oncology Laboratory. Our laboratory currently focuses on DNA-repair and signal transduction pathways in cervical carcinoma and intraepithelial neoplasia. We are seeking candidates who would translate this research into fundable clinical research projects. Qualifications: M.D. or M.D.-Ph.D., Boardcertification in gynecologic oncology, advanced laboratory research experience in the biology of cervical carcinoma and intraepithelial neoplasia, documented by publications in peer-reviewed journals, and expertise in clinical gynecologic oncology trials. Academic rank will be commensurate with experience. Applicants should send a curriculum vitae to: Dr. S. Faro, Chairman, Department of Obstetrics and Gyne-cology, 1653 West Congress Parkway, Chicago, IL 60612.

ACQUISITIONS EDITOR PHYSICAL SCIENCES

Major university press seeks Acquisitions Editor in the physical sciences. Qualified candidates will have five-plus years of direct experience and a proven track record in acquisitions. Ideal candidate will have similar editorial experience at a major STM publisher or university press. Experience working with physics books preferred, but candidates in other physical sciences are encouraged to apply. Cambridge University Press is a leader in physics publishing, and the successful candidate would be building on an extensive and highly regarded list. Excellent benefits and vacation package. Please send résumé, list of acquisitions, and cover letter stating present salary to: Personnel Director, Department PME, Cambridge University Press, 40 West 20 Street, New York, NY 10011-4211.

DIRECTOR OF TRANSGENIC MICE FACILITY

An institutional fully operating transgenic facility equipped with the newest technology. Position requires experience with producing transgenic and knockout mice and management skills. A very competitive salary and excellent opportunities for academic interactions. Please send curriculum vitae to: Dr. Katya Ravid, Biochemistry K225, Boston University School of Medicine, 715 Albany Street, Boston, MA 02118. NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES (NIAMS) NATIONAL INSTITUTES OF HEALTH (NIH) PUBLIC HEALTH SERVICE (PHS) BETHESDA, MARYLAND

POSTDOCTORAL POSITION IN SIGNAL TRANSDUCTION

The Arthritis and Rheumatism Branch (ARB) Cellular Immunology Section, NIAMS, has a position available in the Fall of 1999 to pursue studies on molecular aspects of signal transduction in the immune system. We use the Fc receptor for IgE on mast cells as a useful paradigm for defining, qualitatively and quantitatively, how a topological event ---- aggregation of the receptor - is translated into a signaling cascade. A variety of approaches ranging from genetic, cell biological, biophysical, protein chemical, and mathematical modeling techniques, are used. More information is available at http://www.nih.gov/niams/about/irp/metzger.htm. Applicants must have a doctorate degree in chemistry, biochemistry, molecular biology, medicine and other relevant disciplines, have less than 5 full years of postdoctoral experience when they begin. Submit a CV, one- page summary of interests, and names of three potential references to H. Metzger, Section on Chem. Immunol., ARB, NIAMS, Building 10, Room 9N-228, 10 Center Dr. MSC 1820, BETHESDA, MD 20892-1820. Tel: 301-435-6126, Fax: 301-402-0012 or metzgerh@mail.nih.gov.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

DIRECTOR

BIOENGINEERING AND PHYSICAL SCIENCE PROGRAM NATIONAL INSTITUTES OF HEALTH, BETHESDA, MARYLAND

The NIH Office of Research Services is seeking a highly qualified individual to direct and manage the research conducted by its Bioengineering and Physical Science (BEPS) Program. The Director, BEPS, oversees a collaborative research program supporting intramural scientists of all Institutes and Centers of the NIH. The BEPS Program is structured around collaborations with NIH intramural scientists working on a wide spectrum of biomedical research projects. BEPS engineers and scientists contribute to this research in the areas of measurement, imaging, mathematical analysis and modeling, and the design of specialized research protocols and equipment. An integral aspect of this collaborative research is the development of the oretical and experimental methods and novel instrumentation. The BEPS Director, as a vital member of the NIH senior scientific staff, is responsible for planning and developing the programs and activities of BEPS to further the integration of physical science and engineering principles into biomedical research and ensure that intramural research priorities are met. A copy of the complete recruitment announcement and an overview of the BEPS research program may be found at www.nih.gov/od/ors/beps/. Candidates for this position must have a M.D. or Ph.D. degree with significant research and managerial experience in fields related to bioengineering, the physical sciences, biology, or medicine. Candidates from academia, industry, and Federal laboratories are encouraged to apply. Interdisciplinary, collaborative research experience should be highlighted in applications, as well as demonstrated capability to manage multiple cooperative efforts. Salary is negotiable up to executive levels consonant with the individual's qualifications (up to \$125,900, with an additional Physician Comparability Allowance of up to \$20,000, if applicable). Benefits associated with Federal employment are included. All applications should consist of a statement of research and management interests; a career synopsis including a history of contributions to research collaborations; a current curriculum vitae and bibliography; and the names and addresses of five references. Applications must be postmarked by close of business June 1, 1999 and sent to Ms. Leslie Everheart, National Institutes of Health, ORS Hurnan Resources Branch, 31 Center Drive, MSC 2157, Building 31, Room 4B-41, Bethesda, Maryland 20892-2157, phone: 301-402-1528, e-mail: everheal@ors.od.nih.gov. NIH is an Equal Opportunity Employer

NIH Postdoctoral Positions - HIV Research Entry Mechanisms, Env Interactions with Receptors & Coreceptors, Novel Treatment and Protection Strategies

Projects: 1)Mechanisms of HIV entry. Following our initial discoveries of the major HIV coreceptors CXCR4 and CCR5 [Science (1996) 272:872; Science (1996) 272:1955], we identified coreceptor activity for other chemokine receptors and related orphan proteins [J.Exp.Med. (1997) <u>185</u>:2015; Nature (1997) <u>388</u>:238; J.Biol.Chem. (1998) <u>273</u>:23799; Ann.Rev.Immunol. (1999) <u>17</u>: 657]. We now seek to unravel the sequential protein-protein interactions and associated conformational changes by which HIV Env uses CD4 and coreceptor to induce membrane fusion and virus entry. **2)** Novel HIV therapeutic and prevention strategies. Using our knowledge of Env interaction with target cell molecules, we are devising novel therapeutic and protective agents [Proc.Natl.Acad.Sci. USA (1998) <u>5</u>:11511]. **3)** Identification of new viral receptors. Approaches previously developed to identify HIV receptors are being applied to other important pathogenic enveloped viruses.

Experimental approaches: molecular, genetic, immunochemical, and biophysical analyses of molecules involved in HIV entry; hybridoma technology to enhance novel vaccine strategies; in vitro systems and animal models to study novel anti-HIV agents; development of new functional cDNA library screening methods.

Experience in molecular biology, protein chemistry, virology, immunology, or membrane biochemistry strongly preferred. Send CV and names of three references to:

> Edward A. Berger, Ph.D. Chief, Molecular Structure Section Laboratory of Viral Diseases, NIAID Bldg. 4, Rm. 236 National Institutes of Health Bethesda, MD 20892-0445 Fax: (301) 480-1147 email: edward_berger@nih.gov



POSITIONS OPEN

CELL & MOLECULAR TECHNOLOGIES, INC.

Cell & Molecular Technologies, Inc. (CMT) is an emerging biotechnology company that performs contract research for the pharmaceutical and biotechnology industry. We are rapidly expanding and seeking highly skilled, motivated, and innovative research scientists.

SENIOR and ASSOCIATE MOLECULAR BI-OLOGISTS. Ph.D., M.D., B.S., or equivalents in molecular biology, biochemistry, or a related field with at least three years of postgraduate experience. Proficiency in state-of-the-art molecular biology techniques, including cDNA library construction and screening, PCR methods, RNA manipulation, genomic DNA cloning, expression cloning, and gene expression analyses required. Responsibilities include cloning, expressing, and characterizing a wide range of eukaryotic and prokaryotic genes.

of eukaryotic and prokaryotic genes. ASSOCIATE CELL CULTURE BIOLO-GISTS. B.S./B.A. or M.S. in cell biology, biochemistry, or a related field with at least two years of experience in eukaryotic/prokaryotic cell culture. Experience in the production of native and recombinant proteins in large-scale culture systems, including bioreactors, cell factories, roller bottles, spinner cultures, or fermentors desirable. Expertise in basic biochemical techniques, including electrophoresis, cell fractionation, and immunoassay methods required. Responsibilities include culturing and characterizing bacterial, fungal, insect, and mammalian cells. SENIOR PROTEIN BIOCHEMISTS. Ph.D. or

SENIOR PROTEIN BIOCHEMISTS. Ph.D. or equivalent in biochemistry, chemistry, or a related field with at least two years of postdoctoral experience in protein purification. Responsibilities include purification and characterization of native and recombinant proteins from prokaryotic and eukaryotic cells.

CMT offers attractive salaries and benefits. We are located 90 miles west of New York City in Warren County New Jersey. To apply please send complete curriculum vitae, including list of publications and the names and addresses of three references, to:

> Dr. Michael J. Tocci Cell & Molecular Technologies, Inc. 580 Marshall Street Phillipsburg, NJ 08865 FAX: 908-859-6437 E-mail: mtocci@cmt-inc.net

Visit our website for further information, website: www.cmt-inc.net. CMTI is an Equal Opportunity Employer.

chill b un Equit opponing Employed

The Department of Biology at MIT seeks applicants for a **RESEARCH SCIENTIST** position in the area of bioinformatics, the study of biology using modern technology of computational science and/or methodology involving engineering. This position is for a term of five years, with a salary of \$45,000 assured. The Research Scientist will have independent space and research support to establish his/her program. Applicants for the position should have recently received a Ph.D. or similar advanced degree, and may or may not have had postdoctoral experience. The potential to contribute to the forefront in research and to interact with colleagues in the Department of Biology at MIT are important criteria for the successful applicant.

All applicants must submit a curriculum vitae and three letters of reference. Please reference position BIORS-001.

Interested candidates should apply to:

Phillip A. Sharp, Professor and Head Department of Biology, 68-132 Massachusetts Institute of Technology 77 Massachusetts Avenue Cambridge, MA 02139-4307

For more information on the Department of Biology and MIT visit our website: http://web.mit.edu/biology/www/.

The Massachusetts Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Qualified women and minorities are encouraged to apply. POSITIONS OPEN



MATHEMATICAL MODELER

For the Diving and Environmental Physiology Department, Naval Medical Research Center, Bethesda, Maryland, we are inviting applications for a mathematical modeling position that will act in support of research in decompression sickness. The position requires strong mathematical skills, as well as experience in programming. Some knowledge of statistics and an advanced degree in a physical science, engineering, mathematics, or statistics is preferred. The Henry M. Jackson Foundation for the Advancement of Military Medicine is a private nonprofit organization providing support services to the military medical community. Those interested should send a résumé, including the names of three references, to:

Human Resources Department Attn: PL#2980440 Henry M. Jackson Foundation for the Advancement of Military Medicine 1401 Rockville Pike, Suite 600 Rockville, MD 20852 E-mail: hr@hjf.org

Equal Opportunity Employer/Affirmative Action.

IMMUNOLOGISTS

The University of Washington seeks highly qualified applicants for tenure-track appointments in the Department of Immunology. Applicants must hold Ph.D. or M.D. degrees and have demonstrated the ability to establish an independent research program in immunobiology. Although the emphasis will be placed on recruiting ASSISTANT PROFESSORS to the department, outstanding applicants at all levels are encouraged to apply. The Department of Immunology offers excellent laboratory space, flow cytometry, confocal microscopy, and transgenic animal facilities, and access to contemporary analytical tools to address complex systems at the genetic and protein level. Send curriculum vitae, a brief description of proposed research, and names and addresses of three references (by 15 June 1999) to: Dr. Christopher Wilson, Chairman, Department of Immunology, Campus Box 357650, University of Washington, Seattle, WA 98195-7650.

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

SCIENCE WRITER/EDITOR

Bachelor's degree in journalism, science, or related field required (Master's degree preferred in same areas). For complete list of qualifications and responsibilities, please write to address below or see our Louisiana State University website: www.lsu.edu. Application deadline is April 30, 1999, or until candidate is selected. Submit letter of application, résumé, and three samples that demonstrate ability to write about complex scientific/research issues to: Sarah Sue Goldsmith, Office of University Relations, 3960 West Lakeshore Drive, Louisiana State University, Ref: #018141, Baton Rouge, LA 70808. Email: inssg@unix1.sncc.lsu.edu.

LSU is an Equal Opportunity/Equal Access Employer.

IMMUNOLOGIST/NEUROIMMUNOLO-GIST to join multidisciplinary neuroscience laboratory studying cellular and molecular mechanisms by which central neural pathways modulate inflammatory reactivity in brain and cerebral vasculature and are neuroprotective. Strong background/experience in cellular and/or molecular immunology, inflammation, cytokinc biology. Neuroscience experience a plus. POSTDOCTORATE/RESEARCH ASSO-CIATE/INSTRUCTOR/ASSISTANT PRO-FESSOR, based on experience. Contact: D. J. Reis, Division of Neurobiology, Weill Medical College of Cornell University, 411 East 69th Street, New York, NY 10021. E-mail: djreis@mail.med. cornell.edu. Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Vetrans.

POSITIONS OPEN

DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY

A full-time annually renewable position at rank of **RESEARCH ASSOCIATE** is available approximately July 1, 1999. This individual will study extracellular matriz molecules, receptors, and cytokines and their role in promoting successful pancreatic islet transplantation to cure diabetes. A Ph.D. or M.D. with three years of postdoctoral experience, some of which will be in cell adhesion biology, is required.

Individual(s) will have their own projects and work with a team of Surgeons, Pathologists, Cell Biologists, Immunologists, and Biochemists working on ways to improve the *in vitro* viability and *in vitro* use of islet transplantation. Applicants should have expertise in tissue culture, protein chemistry, cell adhesion biology, and have good written and oral communication skills. This position will work under Leo Furcht, M.D. and James McCarthy, Ph.D. POSTDOCTORAL POSITIONS are available

POSTDOCTORAL POSITIONS are available immediately to work on the above described projects. The positions are for two to three years with potential for career advancement.

Please send curriculum vitae along with research interests and the names of three references by May 31, 1999, to:

Research Associate/ Postdoctoral Associate Searches c/o Marilyn Green University of Minnesota Department of Laboratory Medicine and Pathology Box 609 Mayo Building 420 Delaware Street Minneapolis, MN 55455

The University of Minnesota is an Equal Opportunity Educator and Employer.

EPIDEMIOLOGIST

The Institute of Environmental and Human Health at Texas Tech University/Texas Tech University Health Sciences Center is searching for an outstanding Epidemiologist. Rank and salary are open and will be commensurate with qualifications and experience. The academic department with which the successful applicant will be associated may be in the Texas Tech University and/or Texas Tech University Health Sciences Center. The person to be hired should have interdisciplinary experience in an academic environment and must be capable of working effectively in a team. The person will be expected to take the lead in the development of the epidemiological aspects of proposals in the areas of reproductive epidemiology and in neurology/psychiatry particularly as related to toxic chemical exposures. Prior experience in this area is desirable, which should be evidenced by funding and publications. The person must be capable of com-municating effectively with Physicians, Statisticians, Toxicologists, and any other field working within the Institute. This should be evidenced by effective teaching and the direction of graduate students. Applica-tions will be accepted until May 15, 1999, or until the position is filled. Additional information about The Institute of Environmental and Human Health may be found at website: http://www.ttu.edu/tiehh. Applications should be sent to: Chair of Epidemiology Search Committee, The Institute of Environmental and Human Health, Texas Tech University/Texas Tech University Health Sciences Center, Reese Center, Box 41163, Lubbock, TX 79409-1163. Texas Tech University is an Affirmative Action/Equal Employment Opportunity Employer.

WATERSHED SCIENTIST. Ph.D. with proven record of funded proposals and project management to direct a new program. Prefer physical sciences background (hydrology, geomorphology) with working knowledge of engineering practices for flood control, non-point source pollution control, erosion control, stream restoration, and ecology desirable. Mail curriculum vitae to: E. Hartman, San Francisco Estuary Institute, 1325 South 46th Street, Richmond, CA 94804. E-mail: lizh@sfei.org.

LONG TERM COLLABORATIVE RESEARCH POSITION

A position is available immediately for a supporting research scientist in the Laboratory of Molecular and Developmental Biology in the National Eye Institute, National Institutes of Health. This position involves collaborative experimentation on the various projects within the laboratory, including research on novel mechanisms for introducing subtle mutations into the mouse genome, and studying the function of alpha crystallin/small heat shock proteins using gene knockout and transgenic mice. This is intended to be a long term appointment and the chosen individual will have a major role in maintaining research continuity within the laboratory. The applicant must be a US citizen or permanent resident, have a PH.D and/or M.D. degree, and have previous experience in molecular biology, cell biology, tissue culture and/or biochemistry. The researcher will have the opportunity to attend national scientific meetings to present research and keep abreast of latest scientific developments. Salary ranges from \$58,000 to \$89,000 depending upon previous postdoctoral experience and education. The position is indefinitely renewable depending on mutual agreement. Please send curriculum vitae, bibliography, and names of three references to: Dr. Eric Wawrousek, Laboratory of Molecular and Developmental Biology, NEI, NIH, 6 Center Drive - MSC 2730, Building 6, Room 218, Bethesda, MD 20892-2730. Tel: (301) 496-8841; Fax: (301) 402-3603; e-mail: ericw@helix.nih.gov. NIH IS AN EQUAL OPPORTUNITY EMPLOYER

Non-clinical Senior Lecturer

Myeloid Leukaemia & Gene Therapy



Department of Haematological Medicine *Guy's, King's & St Thomas' School of Medicine*

The Department of Haematological Medicine at Guy's, King's & St Thomas' School of Medicine has obtained funding for a Non-clinical Senior Lecturer to lead a team of researchers (to be appointed) focussed on regulation of cell cycle and apoptosis with emphasis on myeloid leukaemo genesis. The funding includes salaries and consumables for a research fellow, research assistant and senior technician for a period of five years.

The research group will be based in the recently refurbished and comprehensively equipped "Leukaemia Sciences Laboratories" in the ground floor of the Rayne Institute. The Haemato-Oncology research is closely affiliated with the Department of Molecular Medicine (headed by Professor F Farzaneh) who is the Scientific Director of the Myeloid Leukaemia and Gene Therapy inter-departmental research group (IRG). The IRG comprises of 35 Scientists and major research areas include vector development, immune dysfunction in Myeloid Leukaemia, DNA Methylation and Genomic Instability in Myeloid Leukaemia.

The salary available for the post is on the scale \$32,630 - \$36,598 inclusive of \$2,134 London Weighting Allowance per annum.

Applicants with a proven track record of holding project or programme grants and publications in high impact factor journals will be preferred. For further enquiries after receiving an information pack regarding the post, please contact Professor G J Mufti, on 0171 346 3080, fax: 0171 346 3514 or e-mail: ghulam.mufti@kcl.ac.uk.

An application form and job description is available from The Personnel Department, 2nd Floor, Weston Education Centre, Cutcombe Road, Denmark Hill, London SE5 9PJ (leela.mukherjee@kcl.ac.uk. The closing date for receiving completed application forms will be 23 April 1999.

Promoting excellence in teaching, learning & research Equality of opportunity is College Policy

EUROPEAN OPPORTUNITIES

Southampton Oceanography Centre

Director

The Southampton Oceanography Centre is seeking a new Director to succeed Professor John Shepherd. It is hoped that the successful applicant will be able to take up the post on 1 October 1999 or as soon as possible thereafter.

The Southampton Oceanography Centre (SOC) is an international centre of excellence in marine and earth science, established as a joint venture between the University of Southampton and the Natural Environment Research Council (NERC). SOC comprises the School of Ocean and Earth Science (formed in August 1998 by the merger of the former University Departments of Oceanography and Geology); four NERC Research Divisions (formerly the Institute of Oceanographic Sciences); parts of the NERC Research Vessel Services, and various national facilities. It is housed in a purpose-built complex on the Southampton waterfront. One of the Director's primary responsibilities will be to continue the integration of the various components to create a world-class facility.

The Centre Director will be appointed by the University with the agreement of the NERC.

The University and NERC are seeking to appoint an individual with a distinguished scientific record in marine science, a national and international reputation, and proven experience of managing a large, diverse scientific institution. Experience of working in both UK University and NERC research environments would be useful.

Further particulars may be obtained from the Personnel Department (P), University of Southampton, Highfield, Southampton SOI7 IBJ, telephone: +44 (0)1703 594046, email: sjc3@soton.ac.uk to whom applications (7 copies of a full CV from UK applicants, one from overseas) should be sent by 7 May 1999. Please quote reference number P/596.

Working for equal opportunities

University of Southampton



IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY & MEDICINE

NERC Centre For Population Biology

Microbial Ecologist

We seek an ecologist with experience of studying microbial populations or communities to join a large group working in population biology and evolutionary ecology. You will develop an independent research programme, probably with strong links to one or more existing microbial ecology research projects at Imperial College. These include studies of sail micro-organisms in model ecosystems (the Ecotron); the transfer of genetic information within bacterial communities; the epidemiology of insect pathogens; evolutionary dynamics of adaptation in yeast and *Caenorhabdites*.

Applicants should have a PhD and relevant research experience in microbial ecology, with a strong interest in ecological and evolutionary questions. A two year contract is offered, with the possibility of renewal. Salary range $\pounds 15,735 - \pounds 23,651$.

Details:

http://forest.bio.ic.ac.uk/cpb/cpb/cpbintro.html; e-mail: I.sable@ic.ac.uk; Tel: +44 (0) 1344 294475; or write to Centre for Population Biology, Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, UK.

Applications to be received by 14th May 1999.

The College is striving towards Equal Opportunities

POSITIONS OPEN

POSTDOCTORAL RESEARCH

The Cedars-Sinai Research Institute is currently seeking professionals to join the Neurogenetics Lab oratory and the Laboratory for Molecular-Genetic Medicine. Cedars-Sinai Medical Center is an affiliate of the UCLA School of Medicine. The Research Institute has established programs in molecular and cellular biology and human genetics. The following positions are available: A total of six Postdoctoral Fellow/Research Associate positions are being recruited for five areas; molecular-genetic study of neurodegenerative disorders (Pulst et al, Nature Genetics, 1996), molecular analysis of familial central nervous system tumors (Scoles et al, Nature Genetics, 1998), developmental genetics (Yamakawa et al, Hum. Mol. Genet. 1998), mouse models of neurologic diseases (Bellugi et al, TINS, in press) and evolutionary genomics (website: http://www.csmc.edu/genetics/ korenberg/korenberg.html). Applicants must possess a Ph.D. degree and significant experience in the above listed areas. The positions are funded for a minimum of two years. The salary is \$25,000 to \$32,000 per annum depending on experience. Send curriculum vitae with names/addresses of three references to: Dr. Stefan M. Pulst or Dr. Julie R. Korenberg, Cedars-Sinai Medical Center, 8631 West Third Street, #1145E, Los Angeles, CA 90048. FAX: 310-967-0130; e-mail: pulst@cshg. org or julie.korenberg@cshs.org. Equal Opportunity Employer.

POSTDOCTORAL POSITIONS RESEARCH ASSISTANT POSITION

Both Postdoctoral and Research Assistant positions available for motivated individuals to study proteinprotein complexes involved in apoptosis and TGF- β signaling in a biochemistry/structural biology laboratory (*Nature* 87:388, 1997; *Cell* 94:585–594, 1998). The Postdoctoral Fellow is expected to perform complete and independent research on one or two projects. The Research Assistant will have an independent project but will receive extensive training and supervision. A Bachelor's degree is required for the Research Assistant position. Applicants should send curriculum vitae and a brief description of research interests to:

Dr. Yigong Shi Lewis Thomas Laboratory Department of Molecular Biology Princeton University Princeton, NJ 08544

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS HARVARD MEDICAL SCHOOL

Immediate openings to study Alzheimer's disease amyloid β-protein structure, peptide-protein interaction, fibril assembly, and biological activity (*PNAS* **93:1125**; *JBC* **272:22364**; *Amyloid* **5:121**). Expertise in structural biology, protein folding, protein chemistry, chemistry, polymer physics, biophysics, or biochemistry desirable. Send curriculum vitae, *citizenship status*, research interests, and contact information for three references to: **Dr. David B. Teplow, Brigham and Women's Hospital**, 77 Avenue Louis Pasteur (HIM-756), Boston, MA 02115. FAX: 617-525-5252; e-mail: teplow@cnd.bwh.harvard.edu.

POSTDOCTORAL POSITION to examine role of calcium in apoptosis and Bcl-2 function (*JBC* 273: 25015, 1998; *JBC* 273:17307, 1998; *JCB* 138:1219, 1997) using intracellular imaging and electrophysiology. Send curriculum vitae and names of three references to: Dr. Clark Distelhorst, Department of Pharmacology, Case Western Reserve University School of Medicine, W337, 10900 Euclid Avenue, Cleveland, OH 44106-4965. FAX: 216-368-3395; e-mail: cwd@po.cwru.edu; website: http://pharmacology.cwru.edu/.

POSITIONS OPEN

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 POSITION AT HARVARD/MEEI

Postdoctoral position is available to study the development of the zebrafish retina and the sensory epithelia of the inner ear. An extensive collection of mutations affecting these organs is available for further analysis. We are primarily interested in loci involved in early morphogenesis, specification of cellular diversity, and organization of neurons. A combination of genetic, molecular, and embryological approaches is used to study these problems. Several defects currently under investigation are relevant to human retinal disorders. Highly motivated individuals with a recent Ph.D. are invited to apply. Please send curriculum vitae, two recent reprints, and names of three referees to: Dr. Jarema Malicki, Harvard Medical School/MEEI R513, 243 Charles Street, Boston, MA 02114. Equal Opportunity Employer.

MOLECULAR TUMOR BIOLOGY AND DEVELOPMENTAL THERAPEUTICS

A POSTDOCTORAL POSITION is available to study genes and proteins involved in cancer cell signal transduction pathways and/or to develop preclinical/ clinical liposomal formulations of anticancer drugs. Recent Ph.D. with experience in molecular biology/ biochemistry and/or toxicology/pharmacology is desirable. Please send curriculum vitae and three references to: Usha Kasid, Ph.D., Associate Professor, Room E208, The Research Building, Georgetown University Medical Center, 3970 Reservoir Road N.W., Washington, DC 20007. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study molecular mechanism of fatty acid transport in mammalian cells (*Cell* 79:427–436; *JBC* 273: 28642–50). Ph.D., M.D., or V.M.D. and experience in molecular/cell biology required. Send curriculum vitae and names of three references, with their e-mail/ FAX, to: Dr. J. Schaffer, Washington University School of Medicine, 660 South Euclid Avenue, Box 8086, St. Louis, MO 63110. E-mail: jschaff@imgate.wustl.edu; FAX: 314-362-0186.

A POSTDOCTORAL POSITION is available to study novel vaccine therapies for HPV-associated cervical cancer. Clinical trials involve adoptive transfer of autologous dendritic cells. Doctoral training in immunology and/or molecular biology preferred. Send curriculum vitae and three letters of reference to: Michael A. Steller, M.D., Women and Infants' Hospital, 101 Dudley Street, Providence RI 02905. Telephone: 401-453-7520; FAX: 401-453-7529; e-mail: michael_steller@brown.edu.

POSITIONS OPEN

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE PHILADELPHIA, PENNSYLVANIA Date Position Available: Immediately

Description: The Division of Urology invites applications from Ph.D's for Postdoctoral Training in cell and molecular biological basis of urologic diseases. The research interests in the Division of Urology include study of bladder and prostate cancer, pediatric urology, erectile dysfunction, incontinence, smooth muscle regulation, signal transduction, connective tissue matrix, and smooth muscle differentiation. The Trainees will interact with basic scientists and Urologists. Qualifications: Ph.D. in physiology, cell/molecular biology, biochemistry, or genetics and familiarity with one or more of the following areas: muscle physiology, cell culture, and nucleic acids (Northern blotting, site-directed mutagenesis, bacculovirus expression system, yeast two hybrid expression system, etc.), expertise in protein chemistry (protein purification, enzymology, SDS-PAGE, and Western blotting). Applicants should be U.S. citizen or immigrant for the NIH Traineeship; however, others will be considered for other Fellowships.

The annual stipend at the NIH level will be supplemented from other sources. This position is available immediately, and interested candidates should send a letter, curriculum vitae, a statement of research interests, and letters from two referees. Submit inquiries to: Dr. Samuel K. Chacko, Director of Basic Urological Research, Division of Urology, 3010 Ravdin Courtyard Building, University of Pennsylvania Medical Center, 3400 Spruce Street, Philadelphia, PA 19104-4283. FAX: 215-898-0719; email: chackosk@vet.upenn.edu.

POSTDOCTORAL POSITION available immediately to study oxidative damage using transgenic mouse models with altered antioxidant defense systems. Experience in molecular techniques required, experience in mitochondrial biochemistry is desirable. Send curriculum vitae, statement of research interests, and names of three references to: Arlan Richardson, Ph.D., Director, Aging Research and Education Center, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7756. E-mail: richardsona@ uthscsa.edu. The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity/Affirniative Action Employer.

POSTDOCTORAL POSITIONS in HIV/AIDS pathogenesis. Virus-cell interactions in neural cells (**Dr. Dennis Kolson**); dendritic cell vaccines and antigen-specific activation/expansion(**Dr. Drew Weissman**); and viral tropism/chemokine receptor utilization (**Dr. Ronald Collman**). Requires background in molecular virology, neurobiology, immunology, or related area. Submit letter, curriculum vitae, and three references to: **Emily Deane**, **280C Clinical Research Building, University of Pennsylvania, Philadelphia, PA 19104-6140. FAX: 215-573-2029.**

Three POSTDOCTORAL and/or RESEARCH ASSISTANT positions are available to study the cell death regulation by novel gene products. Experience in molecular biology preferred. Please send your curriculum vitae and reference letters from three persons who hold responsible positions. Send your application to: Dr. D. Kalvakolanu, Cancer Center, University of Maryland, 655 West Baltimore Street, BRB 9th Floor, Baltimore, MD 21201. Telephone: 410-328-1396; FAX: 410-328-6559; e-mail: dkalvako@ umarvland.edu.

POSTDOCTORAL POSITIONS immediately available to study chemokine receptor signal transduction, gene transcription, and receptor trafficking, utilizing *in vitvo* and *in vivo* models. Send curriculum vitae and the names of three references to: Ann Richmond, Department of Cell Biology, Vanderbilt University School of Medicine, Nashville, TN 37232. E-mail: ann.richmond@mcmail.vanderbilt. edu.



HUMAN FRONTIER SCIENCE PROGRAM (HFSP) Bureaux Europe, 20 place des Halles, 67080 STRASBOURG Cedex, FRANCE

Bureaux Europe, 20 place des Halles, 67080 STRASBOURG Cedex, FRANCE Tel: 33 (0)3 88 21 51 21 Fax: 33 (0)3 88 32 88 97 E-mail: info@hfsp.org Web site: http://www.hfsp.org

CALL FOR APPLICATIONS FOR 2000 AWARD YEAR (Deadline for receipt of applications is 1 September 1999)

The aim of the Human Frontier Science Program (HFSP) is to promote, through international collaboration, basic research to elucidate the complex mechanisms of living organisms, including man. Applications are solicited for the support of research grants, fellowships and workshops in the areas set out below.

	RESEARCI Basic Resear	H AREAS OF THE HFSP rch for the Elucidation of			
1. Eleme 2. Percep 3. Moven 4. Memor	in Functions ntary Processes otion & Cognition nent & Behavior ry & Learning age & Thinking	(M) Biological Functions through Molecular Level Approaches 1. Expression of Genetic Information 2. Morphogenesis 3. Molecular Recognition & Responses 4. Energy Conversion			
ded for programs that	r support research that trans t involve collaboration betwee sts who wish to work in a 'S Grants for basic researc	(PES OF SUPPORT cends national boundaries . Thus, research grants will be awar- en teams in different countries; fellowships are available to young a different country; international workshops are organized in ch (up to 3 years) carried out jointly by research teams in different applicant must be from one of the eligible countries*			
FELLOWSHIPS	countries. The principal applicant must be from one of the eligible countries*. Long Term (1- 2 years) and Short-Term (up to 3 months) Fellowships for researchele early in their careers and from the eligible countries* who wish to do post-doctoral researchele ch in foreign countries, or for researchers from outside the eligible countries who wish to do research in one of the eligible countries*.				
	uu research in one or u				
*Current eligible	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por	te eligible countries". Is can be organized by researchers from the eligible countries". Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States.			
Current eligible Japan, Luxer RESEARCH GRAN Applications f	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por the United Ki TS AND LONG-TERM FELL (awards to for Short-Term Fellowships	s can be organized by researchers from the eligible countries. Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States. OWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1999 be announced in April 2000) and Workshops can be submitted throughout the year			
Current eligible Japan, Luxer RESEARCH GRAN Applications f <i>Scientist</i> Guidebooks and ap by addressing the for You can retrieve c	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por the United Ki TS AND LONG-TERM FELL (awards to for Short-Term Fellowships is interested in organizing a wor plication forms will be avai im below to the HFSP or by for copies of our guidebooks	s can be organized by researchers from the eligible countries. Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States. COWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1999 be announced in April 2000)			
Current eligible Japan, Luxer RESEARCH GRAN Applications f <i>Scientist</i> Guidebooks and ap by addressing the for You can retrieve conttp://www.hfsp.org	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por the United Ki TS AND LONG-TERM FELL (awards to for Short-Term Fellowships is interested in organizing a wor plication forms will be avai im below to the HFSP or by for copies of our guidebooks	A can be organized by researchers from the eligible countries. Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States. COWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1999 be announced in April 2000) a and Workshops can be submitted throughout the year rkshop should contact the Secretariat about possible dates lable in mid-April 1999 and may be obtained upon written request E-mail. Applications using previous year's forms are not accepted. and application forms from our World Wide Web site at			
Japan, Luxer RESEARCH GRAN Applications f <i>Scientist</i> Guidebooks and ap by addressing the for You can retrieve control http://www.hfsp.org	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por the United Ki TS AND LONG-TERM FELL (awards to for Short-Term Fellowships is interested in organizing a wor plication forms will be avai m below to the HFSP or by I copies of our guidebooks	A can be organized by researchers from the eligible countries*. Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States. COWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1999 be announced in April 2000) a and Workshops can be submitted throughout the year rkshop should contact the Secretariat about possible dates lable in mid-April 1999 and may be obtained upon written request E-mail. Applications using previous year's forms are not accepted. and application forms from our World Wide Web site at t name Research Grant Long-Term Fellowship			
Current eligible Japan, Luxer RESEARCH GRAN Applications f <i>Scientist</i> Guidebooks and ap by addressing the for You can retrieve conttp://www.hfsp.org	International workshops countries are Austria, Belgiu nbourg, the Netherlands, Por the United Ki TS AND LONG-TERM FELL (awards to for Short-Term Fellowships is interested in organizing a wor plication forms will be avai m below to the HFSP or by I copies of our guidebooks	A can be organized by researchers from the eligible countries. Im, Canada, Denmark, Finland, France, Germany, Greece, Italy, tugal, the Republic of Ireland, Spain, Sweden, Switzerland, ingdom and the United States. COWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1999 be announced in April 2000) a and Workshops can be submitted throughout the year rkshop should contact the Secretariat about possible dates lable in mid-April 1999 and may be obtained upon written request E-mail. Applications using previous year's forms are not accepted. and application forms from our World Wide Web site at t name Research Grant Long-Term Fellowship			

POSITIONS OPEN

POSTDOCTORAL FELLOW RESEARCH ASSOCIATE

Scientists at the University of Colorado Cancer Center/Lung Cancer SPORE are recruiting for Ph.D.-level positions in the following areas: (1) Gene expression analysis, to include high-density cDNA ar-rays (filter and slide based), SAGE, and Restriction Fragment Differential Display. The candidate should be experienced and technologically motivated to play a major role in the implementation and application of these technologies in the study of lung cancer and other malignant diseases. (2) Mutation detection for screening of clinical and research samples using denaturing HPLC, a high-throughput, automated technology to operate in conjunction with the DNA Sequencing Core. Experience in operating HPLC, broad computer literacy, and cancer biology highly desirable. (3) Developmental biology of cancer to study a novel gene implicated in kidney and thyroid cancers conserved from flies to mammals. A prime goal will be functional analysis of the Drosophila homologue including identification of the relevant pathway(s) and interacting proteins. Postdoctoral ex-perience advantageous. Salary commensurate with experience. Application deadline is April 30, 1999. Contact: Administrator, Division of Oncology, University of Colorado Health Sciences Center, 4200 East 9th Avenue B-171, Denver, CO 80262. E-mail: lucy.parham@uchsc.edu. The University of Colorado is an Equal Employment Opportunity Commission Employer.

POSTDOCTORAL POSITION IN STRUCTURAL CELL BIOLOGY

To examine the structure and function of dynamin, an essential component of endocytosis. Experience in biochemistry, molecular biology, and/or cyroelectron microscopy preferred. Applicants must have less than five years of postdoctoral experience. Send curriculum vitae and names of three references to: Jenny E. Hinshaw, Laboratory of Cell Biochemistry and Biology, NIDDK, Building 8, Room 419, 8 Center Drive MSC 0851, Bethesda, MD 20892-0851. E-mail: jennyh@helix.nih.gov.

ANTIFREEZE PROTEIN STUDIES

POSTDOCTORAL POSITIONS are available to study various aspects of antifreeze proteins from insects, plants, and bacteria. Background in protein biochemistry, protein purification, and molecular techniques preferred. For additional information contact below. Send résumé and three letters of recommendation to: Dr. Jack Duman, Department of Biological Sciences, University of Notre Dame, P.O. Box 369, Notre Dame, IN 46556-0369 USA. Telephone: 219-631-7496; e-mail: duman. 1@nd.edu.

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/.

NEUROPHYSIOLOGIST/NEUROANATO-MIST to join multidisciplinary group studying functional neuroanatomy and molecular mechanisms by which central neural pathways are neuroprotective and regulate cerebral blood flow. Background/experience in neuroanatomy (tracing, cytochemistry) and systems electrophysiology. RESEARCH ASSO-CIATE/INSTRUCTOR/ASSISTANT PROFES-SOR, based on experience. Contact: D. J. Reis, Division of Neurobiology, Weill Medical College of Cornell University, 411 East 69th Street, New York, NY 10021. E-mail: djreis@mail.med. cornell.edu. Equal Employment Opportunity/Affinnative Action/Minorities/Fenules/Disabled/Veterans.

POSITIONS OPEN

POSTDOCTORAL FELLOWS

The Sidney Kimmel Cancer Center, located in La Jolla, is a dynamic and expanding academic research organization devoted to both basic and clinical cancer research. We are seeking Postdoctoral Fellows that are innovative, hard-working, and that have the capacity for independent work. Priority will be given to applicants who bring a Fellowship or stipend that covers at least a portion of their salary. The following positions are open:

Two positions in the Laboratory of Signal Transduction to work on the molecular mechanisms of signal transduction from the T cell antigen receptor, and the tyrosine protein kinases and phosphatases that are involved in these events. Experience with trangenic and knockout mice is a plus. Send curriculum vitae, list of publications, and two letters of recommendation to: **Professor Tomas Mustelin, M.D., Ph.D., e-mail: tmustelin@skcc.org.**

Four positions in cellular and molecular biology. One to work on the molecular mechanisms integrating caveolae-mediated transport with signal transduction and the role of dynamin, caveolin, phosphoinositides, G proteins, sphingomyelin, kinases, and SNAREs in this process. Two to work on tissue- and tumor-specific vascular targeting for drug and gene therapy *in vivo*. Confocal, EM, liposome, and/or viral experience is a plus. One to work on cloning of novel vascular targets, which requires proven experience in the areas of genomic and/or cDNA cloning (conventional and expression-based). (Background: Science 274:239, 269:1435; JCB 141:101; NEJM 339:472) Send curriculum vitae, list of publications, and two letters of recommendation to: Professor Jan Schnitzer, M.D., Sidney Kimmel Cancer Center, 10835 Altman Row, San Diego, CA 92121. E-mail: jschnitzer@skcc.org. Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION is available in the Department of Pharmacology, East Carolina University School of Medicine, to study the roles of molecular motor proteins in mammalian spermatogenesis. The successful candidate should have a Ph.D. in pharmacology, biochemistry, molecular biology, or related discipline. Preference will be given to applicants experienced in GFP/fusion protein expression, advanced molecular biology techniques, and immunocytochemistry. The anticipated start date for this position is August 1, 1999. Please submit curriculum vitae and three letters of reference by June 30, 1999, to: Dr. Ann O. Sperry, East Carolina University School of Medicine, Department of Pharmacology, Green-ville, NC 27858-4353. E-mail: asperry@brody. med.ecu.edu. Federal law requires proper documentation of identity and employability at the time of employment. East Carolina University is an Affirmative Acion/Equal Opportunity Employer and invites applications from women and minority scientists.

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.

NIH-funded research center with faculty at the University of California–San Francisco, University of California–Berkeley, and Stanford seeks **POSTDOC**-**TORAL FELLOW** to study the cell and molecular basis of airway pathology in cystic fibrosis. Please send a curriculum vitae, names and addresses of three referees, and a brief statement of research interests to: Jonathan Widdicombe, Cardiovascular Research Institute, University of California–San Francisco, CA 94143-0130.

9 APRIL 1999 VOL 284 SCIENCE www.sciencemag.org

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately to study T cell (CD4+/CD8+) responses induced by vaccine antigens delivered to the immune system through intact skin, "transcutaneous immunization" (TCI), and transcutaneous delivery of DNA vaccines. TCI is a novel approach to vaccination that avoids the use of needles and thus eliminates most of the risks associated with conventional parenteral immunization approaches. Both the antigen and adjuvant are applied topically. Experience with flow cytometry, cytokine analysis, and tissue culture preferred. Pertinent papers: *Nature* **391**:851, 1998; *J. Immunol.* **161**:3211, 1998; *Nature Medicine* **4**:672, 1998; *Infect. Immuno.* **67**:1100, 1999.

Information about IOMAI Corporation is available at website: www.iomai.com. To apply for position send cover letter and curriculum vitae including names, telephone and FAX numbers, e-mail and mailing addresses of three references.

Please send your résumé to:

Tanya Scharton-Kersten, Ph.D. Department of Membrane Biochemistry Walter Reed Army Institute of Research IOMAI Corporation 2421 Pennsylvania Avenue N.W. Washington, DC 20037-5100 Telephone: 202-782-3137 FAX: 202-782-1890 E-mail: tskersten@iomai.com

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

Positions are available immediately in the Division of Cellular and Molecular Pathology of the Department of Pathology of the University of Pittsburgh School of Medicine. The positions are associated with research opportunities in the role of matrix, growth factors, and transcription factors in hepatocytes growth regulation and liver regeneration. Candidates with experience in relevant areas would be given preference. Please send curriculum vitae to: George K. Michalopoulos, M.D., Ph.D., Professor and Chairman, Department of Pathology, S-410 Biomedical Science Tower, University of Pittsburgh School of Medicine, Pittsburgh, PA 15261. The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION ALZHEIMER'S DISEASE RESEARCH Columbia University College of Physicians and Surgeons New York, New York

An NIH-funded Postdoctoral position is available to study the molecular biology and population genetics of Alzheimer's disease. Approaches will include molecular studies in the human system and experiments in mouse models.

Apply by e-mail to: Benjamin Tycko, M.D., Ph.D., Associate Professor of Pathology, e-mail: btl2@columbia.edu, or Richard Mayeux, M.D., M.P.H., Professor of Neurology, e-mail: rpm2@ columbia.edu. Please list three references.

We take Affirmative Action toward Equal Employment Opportunity.

POSTDOCTORAL POSITION AUDITORY TRANSDUCTION

A position is available starting August 1999 for an experienced Electrophysiologist interested in studying mechanical transduction by hair cells of the inner ear. Electrophysiology projects in the laboratory include strong molecular biology and biochemistry components; candidates with expertise in these areas will be favored. Send curriculum vitae with three references to:

Peter G. Gillespie, Ph.D. Oregon Hearing Research Center NRC04 Oregon Health Sciences University 3181 Sam Jackson Park Road Portland, OR 97201 E-mail: pgillesp@jhmi.edu

The Queen's University of Belfast

Investing in Excellence



As part of a major programme of expansion, the University is supporting the School of Biology and Biochemistry with a major investment of posts to enhance its research and teaching activities. The School wishes to appoint people with a record of publications in quality, peer-reviewed journals, commensurate with age and experience. It is also looking for a lively and innovative teaching capability as part of the University's policy of balanced excellence.

Three Lectureships (Ref: 99/P141C)

Applications are invited from individuals with strong research records and preferably, with some experience in tertiary level teaching in the following areas:

Behaviour / Ecology

Biochemistry

Preferably with interests in: Animal Behaviour Animal Ecology/Conservation Biology Ecological Modelling Physiology/Ecology of Aquatic Animals Preferably with interests in: Molecular Recognition/Structure Prediction Molecular Enzymology Neurochemistry Signal Transduction

Genetics/Molecular Biology

Preferably with interests in:

Behavioural Genetics Microbial Biotechnology Molecular Biology of Infectious Diseases Molecular Evolution/Bioinformatics

2 Year Fixed Term Lectureship in Molecular, Ecology and Evolution (Ref: 99/P142C)

Preferably with interests in:

Population Genetics Eukaryote Genetics Molecular Evolution

Applicants must have an honours degree or equivalent in Biological Sciences or related discipline and a PhD in a relevant area together with a good track record of publications in premier scientific journals. Potential to obtain external funding and lead a team of researchers having impact nationally and internationally is essential for the three lectureships. The successful applicant for the fixed term lectureship must be able to contribute to lectures and practicals, and to supervise final year projects in the areas of population genetics, eukaryote genetics and molecular evolution.

Successful candidates will be expected to develop independent research programmes complementing and collaborating with other members of the School of Biology and Biochemistry and the wider research community at Queen's and establishing strong national and international links. The successful candidates must also be committed to research-led teaching and preferably have some experience of lecturing and/or practical demonstration and/or supervision of student projects. Postdoctoral experience and a proven ability to acquire external funds are also desirable.

Informal enquiries may be made to the School Office, Tel: 00 44 1232 335786 or email: sobb@qub.ac.uk Further information about the School can be obtained on its Home Web page: http://www.qub.ac.uk/bb

Salary: Lecturer Grade A £16,655 - £21,815 Lecturer Grade B £22,726 - £29,048 with eligibility for USS and relocation where appropriate.

The appointment level will depend on qualifications, research record and experience. The University reserves the right to appoint more than one candidate to a particular area.

Closing date: 5.00 pm, Friday 14 May 1999.

Further particulars quoting reference number(s) are available from Personnel Office, The Queen's University of Belfast, Northern Ireland, BT7 1NN. Tel: (01232) 273044 or 273854 (answering machine). Fax: (01232) 324944 or email: personnel@qub.ac.ukCommitted to an Equal Opportunities policy and selection on merit, the University welcomes applications from all sections of the community.

PLEASE NOTE THAT THE UNIVERSITY WILL BE CLOSED FROM 5 APRIL 1999 UNTIL 11 APRIL 1999 INCLUSIVE.

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 variety 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 POSITION is open immediately for study on local Ca²⁺ and cAMP signaling in the context of excitation-contraction coupling, pacemaking, and receptor-mediated signaling in normal and diseased hearts, utilizing electrophysiological and confocal imaging techniques and gene-targeted animal models. Prospective candidate should hold Ph.D., M.D., or equivalent degree with strong background in electrophysiology, having five or less years of postdoctoral experience. Please send curriculum vitae, bibliography, and three recommendation letters to: Dr. Heping Cheng, Laboratory of Cardiovascular Science, National Institute on Aging, Na-tional Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD 21224. Telephone: 410-558-8634; FAX: 410-558-8150; e-mail: chengp@ grc.nia.nih.gov.

NIH is an Equal Opportunity Employer.

Molecular genetics POSTDOCTORAL POSI-TION to study the role of winged helix transcription factors HNF-3B, HFH-11, and HFH-8 in liver and lung morphogenesis. These studies will involve in vivo analysis of these winged helix transcription factors using transgenic and gene knockout mouse models. The Department of Molecular Genetics is located in a new research building with faculty members studying diverse aspects of cell growth and differentiation in tissue culture and mouse models. Please send curriculum vitae and names and telephone numbers of three references to: Dr. Robert H. Costa, University of Illinois at Chicago, Department of Molecular Genetics (M/C 669), 900 South Ashland Avenue, Chicago, IL 60612. FAX: 312-413-0353; e-mail: robcosta@uic.edu. UIC is an Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION is available for studies utilizing transgenic models to study the pathogenesis of neurodegenerative disease. Candidates must have a Ph.D., with experience in inflammation, molecular pathogenesis, and transgenic technology. Send curriculum vitae and three letters of reference to: Dr. Iain Campbell, The Scripps Research Institute, Department of Neuropharmacology, CVN-9, 10550 North Torrey Pines Road, La Jolla, CA 92037. For more information, see our website: http://www.scripps.edu/ hr/jobs/postdoc.htm.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP IN MOLECULAR GENETICS OF RENAL CARCINOMA National Cancer Institute

An immediate opening exists in the Urologic Oncology Branch of the National Cancer Institute for a full-time Postdoctoral Research Training Fellowship for investigating the molecular genetics of hereditary and sporadic kidney cancer. Studies of the molecular genetics of renal carcinoma, including the role of the recently identified VHL tumor suppressor gene (Saence 260, 1993) the c-Met proto-oncogene (Nature Genetics 16, 1997) and the molecular genetic bases of acquired or hereditary cancer are under investigation (Nature Genetics 7, 1994; Science **269**, 1994; PNAS **92**, 1995; PNAS **93**, 1996; PNAS **94**, 1996; PNAS **94**, 1997). There are opportunities to work closely with basic scientists and clinicians at the NCI including the Cancer Genome Anatomy Project (CGAP), the Cancer Chromosome Abnormality Project (CCAP), the Cancer Proteomics Project. Unique reagents are available to study unique genes expressed in kidney cancer, spectral karyotypic changes in early kidney cancer, cDNA microarrays, and molecular fingerprinting

Applicants must have a Ph.D. and/or M.D., relevant experience in cellular or molecular biology, and less than five years of postdoctoral experience.

Please send a cover letter, résumé, and three letters of recommendation by mail or FAX to:

W. Marston Linehan, M.D. Chief, Urologic Oncology Branch National Cancer Institute National Institutes of Health 10 Center Drive, Building 10, Room 2B47 Bethesda, MD 20892-1501 FAX: 301-402-0922

Selection for this position will be based solely on merit with no discrimination for nonmerit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. NIH is an Equal Opportunity Employer.

SENIOR RESEARCH ASSOCIATE and POSTDOCTORAL POSITIONS are available immediately to lead novel areas of study in an established signal transduction laboratory. One area involves the use of structural (X-ray crystallographic) and fluorescence spectroscopic approaches to study the interactions of Cdc42 with new targets and regulators. A second area involves the study of a new GTP-binding protein which acts as a critical switch in cell fate determination. The third area explores signal pathways that impact on mRNA splicing and RNA trafficking.

Highly motivated individuals with recent Ph.D. or M.D. degrees, and a strong background in structural, molecular, and/or cellular biology are encouraged to apply. Please send a curriculum vitae and three references to:

> Dr. Richard A. Cerione Department of Molecular Medicine Cornell University Ithaca, NY 14853-6401 E-mail: rac1@cornell.edu

Cornell University is an Equal Opportunity/Affirmative Action Employer.

ELECTROPHYSIOLOGIST

POSTDOCTORAL FELLOWSHIP position available to study the molecular mechanisms in the regulation of glutamate receptor function. These studies will investigate the effect of protein phosphorylation and protein-protein interactions on the properties of AMPA and NMDA receptors at the singlechannel and whole-cell level. Candidate should have experience in single-channel and whole-cell patch clamp recording techniques. Applicant should send a curriculum vitae and three letters of recommendation to: **Richard L. Huganir**, **Ph.D., Department of Neuroscience**, **The Johns Hopkins University School of Medicine**, **904A PCTB**, **725 North Wolfe Street, Baltimore**, **MD 21205**.

POSITIONS OPEN POSTDOCTORAL FELLOWSHIP IN PROSTATE CARCINOMA NATIONAL CANCER INSTITUTE

A Postdoctoral Research Training Fellowship for investigating the molecular genetics of prostate cancer is available in the Urologic Oncology Branch, NCI. Studies currently underway include analysis of the role of tumor suppressor genes in the development of prostate cancer, and the molecular changes associated with hereditary and sporadic prostate cancer.

There are opportunities to work closely with basic scientists and clinicians at the NCI including the Cancer Genome Anatomy Project (CGAP), the Cancer Chromosome Abnormality Project (CCAP), the Cancer Proteomics Project. Unique reagents are available to study unique genes expressed in prostate cancer, spectral karyotypic changes in early prostate cancer, cDNA microarrays, and molecular fingerprinting.

Applicants must have a Ph.D. and/or M.D., relevant experience in cellular or molecular biology, and less than five years of postdoctoral experience.

Please send a cover letter, résumé, and three letters of recommendation by mail or FAX to:

W. Marston Linchan, M.D. Chief, Urologic Oncology Branch National Cancer Institute National Institutes of Health 10 Center Drive, Building 10, Room 2B47 Bethesda, MD 20892-1501 FAX: 301-402-0922

Selection for this position will be based solely on merit with no discrimination for nonmerit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION JOHNS HOPKINS UNIVERSITY GENE REGULATION IN CANCER

A Postdoctoral position is currently open for work on gene regulation in cancer. The work will focus on the Type II hexokinase gene, which is up-regulated in many cancers. Highly motivated individuals with experience in both protein chemistry and molecular biology will be considered. Productive students having just completed or soon to be completing their Ph.D. thesis work are encouraged to apply. Please send by surface mail curriculum vitae and the names of three references to: Dr. Peter L. Pedersen, Department of Biological Chemistry, Johns Hopkins University, School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205-2185. Equal Opportunity Employer.

A POSTDOCTORAL POSITION is available immediately to study effects of cell-cell interactions during B lymphocyte development. Incumbent will develop molecular and cell biology methods to study stroma-B cell interactions. Experience with molecular biology, immunology, and/or tissue culture useful. Ph.D. and/or M.D. required. Laboratory is located on the NIH campus. Contact: Steven R. Bauer, Ph.D., Division of Cell and Gene Therapies, Office of Therapeutics Research and Review, Center for Biologics Evaluation and Research, Food and Drug Administration, 1401 Rockville Pike, HFM-521, Rockville, MD 20852. Telephone: 301-827-0468; FAX: 301-827-0449; e-mail: bauer@cber.fda.gov. Respond by May 15, 1999.

POSTDOCTORAL POSITION

Postdoctoral position to study mechanism of RSV infection and asthma genetics. Background of molecular biology essential. Desire experience in signal transduction and protein-protein interaction. Twoyear appointment subject to extension. Salary negotiable dependent on gualifications.

Send curriculum vitae and three references to: S. Mohapatra, USF COM, VA Hospital (111D), 13000 Bruce B. Downs Boulevard, Tampa, FL 33612. FAX: 813-910-4041.

Equal Opportunity/Equal Access/Affirmative Action Employer.

Neurofit S.A. is a CRO specialised in preclinical testing of the nervous system. Studies are performed with specific animal models of neurodegeneration in relation to neurological and neuropsychiatric disorders as well as in vitro assays.

Neurofit is a rapidly growing company with a rich networking position in Europe and U.S. Its activities are located in Strasbourg (France) and San Diego (U.S.).

For its Strasbourg location, Neurofit offers a new position:

SCIENTIFIC DIRECTOR (REF 201).

You have expertise as research leader in pharmaceutical and biotechnology industry and you have established your own network. You are a qualified neurobiologist, preferably in CNS pharmacology and experimental models for neurological disorders with experience at international level.

The successful candidate should have the abilities to manage a dynamic team, to rapidly set up new projects and if possible speak some French.

You may send your CV to:

NEUROFIT, rue Jean Sapidus, Parc d'Innovation 67400 ILLKIRCH-FRANCE Tel: +33 (0) 388 651 606 Fax: +33 (0) 388 651 622 e-mail: neurofit@tpgnet.net website: www.tpgnet.net/neurofit

CENTRE FOR BIOMOLECULAR SCIENCES MOLECULAR & STRUCTURAL BIOLOGY

2 Research Fellows & Post-Graduate Studentship

These two posts are available immediately:

Post 1 - Ref: KC106/ABM0/99

Funded by the Wellcome Trust for 3 years, you will work to solve the structures of enzymes in the biosynthetic pathway of rhamnose. This pathway is a potential therapeutic target. Crystals are already in hand for several enzymes. You will determine structures, co-complexes, design site mutants and assay inhibitors. The Wellcome Trust enhance the salary of fellows beyond that normally payable in the UK.

Salary will be at the appropriate point on the 1A Scale for Research Staff (£15,735 - £23,651) (approx \$25,120 - \$37,841) per annum.

Post 2 - Ref: KC112/ABM0/99

This position is available to express, purify and crystallise a protein of therapeutic importance. This research is funded for two years with a possible third year depending on progress. The project is a collaboration with Hoescht Marion Roussel. Post-doctoral experience particularly with insect cell lines is desirable.

Salary will be at the appropriate point on the Grade 2 Scale for Research Staff (£21,815 - £29,048) (approx \$34,900 - \$46,476) per annum.

Positions will be held in the new purpose built Biomolecular Sciences Building. The lab is well equipped for protien purification, structure determination and enzyme assay. Informal enquries on all positions to Dr. Jim Naismith (naismith@st-andrews.ac.uk).

Application forms and further particulars from Personnel Services, University of St Andrews, College Gate, North Street, St Andrews, Fife KY16 9AJ, (tel: 01334 462571, by fax 01334 462570 or by e-mail Jobline@st-andrews.ac.uk). We regret applications cannot be made by e-mail.

Closing date for Post-doctoral positions: 22 April 1999.

Studentship

UNIVERSITY of ST. ANDREWS

A BBSRC post-graduate studentship is available to work with Dr J Naismith on the rhamnose biosynthetic pathway in relationship to food safety. This 3 - year studentship is only open to EU citizens. Formal enquiries to Anika Norton, BMS, Bute Building, St Andrews KY16 9TS.

The University operates Equal Opportunities and No Smoking Policies.



Department of Psychiatry

University Lecturership (Non-Clinical) in Psychology

Applications are invited for the post of University Lecturership (non-medical) in Psychology from candidates who have carried out advanced research in psychology applied to psychiatric disorder. There will be limited teaching duties. The University Lecturer will be a non-stipendiary fellow of Jesus College. The starting salary will be in the range £16,655 - £31,010, according to age, qualifications and experience.

Further particulars may be obtained from Professor Guy Goodwin, University Department of Psychiatry, The Warneford Hospital, Oxford OX3 7JX (tel: 01865 226451, fax: 01865 204198, email: guy.goodwin@psych.ox.ac.uk), to whom applications (six copies), together with a full curriculum vitae, a list of research publications (please star the five most important papers and include reprints if available), a statement of research objectives, and the names of three referees should be sent. The closing date for applications is 14th May 1999.

The University is an Equal Opportunities Employer.

The Max-Planck-Institute for Astronomy (MPIA) is seeking an ambitious, highly-qualified post-doctoral appointee to participate in instrumentation development. The successful candidate will be expected to take a leading role in the definition, construction, commissioning and use of innovative astronomical instrumentation for use on ground based telescopes. We are particularly interested in developing infrared interferometric instruments for use on the Large Binocular Telescope (LBT) in Arizona and the VLT in Chile. In addition to these 8 m class telescopes, the MPIA has major instrumentation programs associated with the 3.8 m UKIRT on Mauna Kea, the 2.2 m telescope on La Silla, and the 1.2, 2.2 and 3.5 m telescopes on Calar Alto. We recognize that instrumentation development requires significant investment of both resources and time. The postdoctoral position includes sufficient funds for publications, travel, etc., and the appointment will be for an initial period of three years, with yearly extensions thereafter to a maximum of five years.

Interested candidates should send application materials, including curriculum vita, the names of two references, and a brief statement of research interests to the address below. The deadline for applications is June 1 1999. Further information on the instrumentation and science interests of the MPIA community can be found at http:// www.mpia-hd.mpg.de

Send application materials by June 1 1999 to

Dr. Tom Herbst,

Max-Planck-Institute fuer Astronomie Koenigstuhl 17, D - 69117 Heidelberg, Germany.

The Max Planck Society is an equal opportunity employer.

POSITIONS OPEN

NIH-funded POSTDOCTORAL/RESEARCH ASSOCIATE positions are available to conduct studies on information processing in a small neural circuit. Applicants should have recent training in either molecular biological or electrophysiological techniques. The successful applicants will join a laboratory in a newly expanding, highly interactive oceanic research institute focusing on problems in modern neurobiology. The laboratory uses cellular, molecular, and electrophysiological approaches to understand how the proteins and genetic programs of identified neurons are modulated to produce a continuously adaptive motor pattern. Information on the laboratory and Institute can be found at website: http:// www.neurobio.upr.clu.edu/baro. Please send curriculum vitae and references to: Deborah J. Baro, Institute of Neurobiology, 201 Boulevard del Valle, San Juan, PR 00901. E-mail: djbaro@ neurobio.upr.clu.edu.

POSTDOCTORAL POSITION RUTGERS UNIVERSITY NEWARK, NEW JERSEY

Molecular Genetics of Schizophrenia Project involves the fine mapping and candidate gene isolation. See website: http://www.cmbn.rutgers.edu/ cmbn/faculty/brzustowicz/Brzustowicz.htm for more details. Background in linkage studies, physical mapping, and mutation analysis preferred. Position is state funded at S28,000 plus benefits—higher with qualifications. Campus is near train from New York City and northeast New Jersey. Send curriculum vitae and three references to: Linda Brzustowicz, M.D., Rutgers University, 197 University Avenue, Newark, NJ 07102. Telephone: 973-353-1080, ext. 3331.

POSTDOCTORAL POSITIONS. Positions are available to study (1) the mechanisms of Alzheimer's disease β-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. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Analysis of Fas and other apoptotic mechanisms in the pathogenesis and recovery from autoimmune disease. Work with murine and culture models. Experience in signal transduction mechanisms and immunology or neurobiology is desirable. Pleaes send curriculum vitae and reference list to: John H. Russell, Department of Molecular Biology and Pharmacology, Washington University Medical School, 660 South Euclid Avenue, St. Louis, MO 63110. Washington University is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION in cellular and molecular neuroendocrinology available immediately for studying the cellular and molecular mechanisms of actions of alcohol and estrogen on neuroendocrine cell growth and differentiation. Experience with cell cultures and molecular biology techniques is required. Send curriculum vitae and three letters of reference to: **Dipak K. Sarkar, Chairman, Department of Animal Sciences, Rutgers University, New Brunswick, NJ 08854. FAX:** 732-932-6996; e-mail: sarkar@aesop.rutgers.edu.

POSTDOCTORAL POSITION to study the regulation of gene expression in parasympathetic nerves. Applicants should have a strong background in molecular biology and experience in promoter analysis. Send curriculum vitae and names of three references to: Allison D. Fryer, Ph.D., and David B. Jacoby, M.D., Johns Hopkins School of Public Health, Johns Hopkins University, 615 North Wolfe Street, Baltimore, MD 21205. FAX: 410-955-0299; e-mail: afryer@jhsph.edu. JHU is an Equal Opportunity/Affinative Action Employer.

POSITIONS OPEN

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

The National Institutes of Health has both! For more information, visit our website which lists an array of clinical and postdoctoral opportunities, including tenure-track positions. http://www.training.nih.gov

The NIH is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP IN PSYCHIATRY GENETICS

The Psychiatry Department at the University of Iowa College of Medicine has openings for Postdoctoral Fellowships in psychiatric genetics. These are NIMH-supported stipends available for up to three years. Projects include studies of the effects of alcohol on transcription of growth factors and neurotransmitters (**Dr. Michael Miller**); linkage studies of anxiety disorders and schizophrenia (**Dr. Raymond R. Crowe**); genes for mental retardation (**Dr. Robert Philibert**); genetic studies of autism (**Dr. Joseph Piven**); and statistical methods for gene mapping studies of complex disorders (**Dr. Veronica Vieland**).

For more information write to: Dr. Raymond R. Crowe, University of Iowa College of Medicine, Psychiatry Research/1-291 MEB, Iowa City, IA 52242-1000. Applicants must be permanent residents or U.S. citizens. The University of Iowa is an Affirmative Action/Equal Opportunity Employer; women and minorities are encouraged to apply.

POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS

Fellowships available to residents of North America with Ph.D., M.D., or comparable degree and less than one year of postdoctoral laboratory experience by application deadline for beginning training in basic biomedical research. The three-year award consists of a stipend of \$33,000 for the first year, \$35,000 for the second year, and \$37,000 for the third year; \$2,000 per annum research allowance; travel to Fellowship location; annual meeting. Application deadline August 15, 1999; Fellowships activate following July 2000. For application forms, write: The Helen Hay Whitney Foundation, 450 East 63rd Street, New York, NY 10021. FAX: 212-688-6794.

POSTDOCTORAL/RESEARCH SCIENTIST positions available to study the role of membraneanchored metalloproteinases in angiogenesis and metastasis (*Cell* 95:365, 1998; *Canter Res.* 58:5221, 1998; *JBC* 271:9135–9140, 1996; *Nature* 375:244– 247, 1995). Strong background in cell or molecular biology required. U.S. citizens and resident aliens only. Send curriculum vitae and letters of reference to: Stephen J. Weiss, M.D., Upjohn Professor of Medicine, University of Michigan Cancer Center, 5301 MSRB III, 1150 West Medical Center Drive, Ann Arbor, MI 48109-0640.

POSTDOCTORAL POSITION available to study molecular mechanisms of oncogene-specific T cell tolerance and strategies for breaking tolerance in novel transgenic mouse models of cancer. Background in molecular immunology/mouse models desirable. Send curriculum vitae and names of three references to: Martin G. Sanda, M.D., 2916 Taubman Center, 1500 East Medical Center Drive, University of Michigan, Ann Arbor, MI 48109-0330. FAX: 734-647-9271; e-mail: msanda@ umich.edu.

POSTDOCTORAL POSITION. Ph.D. in cell biology, pharmaceutics, or material science to work in tissue engineering and drug delivery center of excellence. Excellent written and oral communication skills required. Send curriculum vitae to: Dr. Cato Laurencin, Center for Advanced Biomaterials and Tissue Engineering, Department of Chemical Engineering, Drexel University, 3141 Chestnut Street, Philadelphia, PA 19104.

9 APRIL 1999 VOL 284 SCIENCE www.sciencemag.org

POSITIONS OPEN

POSTDOCTORAL POSITION AVAILABLE

The University of Virginia, Division of Gastroenterology and Hepatology has an NIH-funded Postdoctoral position available beginning July 1, 1999. The GI Training Program at the University of Virginia Health Sciences Center is committed to developing Investigators (M.D. and/or Ph.D.) dedicated to careers in academic gastroenterology. Training is offered in several disciplines: immunology, molecular biology, signal transduction, physiology, cancer biology, genetics and epidemiology, and health evaluation sciences. Seven research teams composed of a total of thirty faculty members from both inside and outside the Division apply these disciplines to the study of digestive disease. For more information contact: Dr. Fabio Cominelli, University of Virginia, Division of Gastroenterology and Hepatology, P.O. Box 10013, Charlottesville, VA 22906.

A POSTDOCTORAL POSITION is available immediately to study the interaction of *Pseudomonas* exotoxin with mammalian cells. Emphasis will be on structure-function studies and the interaction of this toxin with epithelial cells. A strong background in biochemistry and/or cell biology is required. Applicants must have a Ph.D. or M.D. degree and should have less than five years of postdoctoral experience. Send curriculum vitae and contact information with three references to: Dr. David FitzGerald, Laboratory of Molecular Biology, Building 37, Room 4B03, NCI, NIH, Bethesda, MD 20892-4255. E-mail: djpf@helix.nih.gov.

GLOBAL OPPORTUNITIES

Applications from Pakistani nationals are invited for the following senior-level posts in organizations under the Ministry of Science and Technology (MoST): (1) **CHAIRMAN** Pakistan Council of Scientific and Industrial Research (PCSIR); (2) **CHAIRMAN** Pakistan Council for Science and Technology (PCST); (3) **MEMBER (SCIENCE)**, Pakistan Science Foundation (PSF).

The posts of Chairmen are in the National Pay Scale 22 (Rs 10900-610-17000 plus usual allowances), whereas the post of Member (Science) is in the National Pay Scale 21 (Rs 10190-545-15640 plus usual allowances). For details contact: The Ministry of Science and Technology, Pak Secretariat, Block D, Islamabad. Telephone: +9251-920-1050; FAX: +9251-920-5150; e-mail: jsail@isb.comsats.net. pk. Complete information can also be downloaded from website: http://www.most.gov.pk/. Last date of application is April 24, 1999.

COMPUTER MARKETPLACE

KELL for Windows

Definitive radioligand binding package analyzes saturation and competition equilibrium studies plus association and dissociation experiments. Incorporates LIGAND plus an assay analyzer for protein etc. \$499

WWW.biosoft.com BIDSDFT[®] email: info@biosoft.com Tel: 314 524 8029

Circle No. 29 on Readers' Service Card

MARKETPLACE





Circle No. 50 on Readers' Service Card

	MARKETPLACE
	New! AUSA [™] Protein Kinase Assay Kits
	<pre>●Patented●User Friendly</pre>
	New! Reflex [™] Fluorescent Gel Stain ●ssDNA and ssRNA●Easy Protocol
	Transbio Corporation
	1012C Wilson Point Road, Baltimore, MD 21220 (410)918-9700 Fax: (410)918-9710
	E-mail: info@transbiocorp.com
L	www.transbiocorp.com
	Circle No. 7 on Readers' Service Card
	Duchto Free
	Bubble-Free Gel Casting
	Glass plate surface treatment reagent for
ρ	perfect gel casting with Bubble-Free Solution" YMO RESEARCH (888) 882-9682 www.zymor.com
	Circle No. 51 on Readers' Service Card
	T.E.A.M.* Lampire
	*The Expert Antibody Maker
	Polycional Alternatives: avian
Í	projects, as low as \$315.
	Lampire Biological Laboratories, Inc.
\	Ph: 215-795-2838 Fax: 215-795-0237 e-mail: lampire@lampire.com
K	Circle No. 1 on Readers' Service Card
C O Te	eystone Labs Sustom Oligos Prder: www.keydna.com 1: 800-788-4362 • Fax: 800-786-4362
C O Te A	eystone Labs 90 ^c /base Sustom Oligos No Set-up Fee! Order: www.keydna.com
C O Te A	eystone Labs Sustom Oligos Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card
C O Te A	eystone Labs <i>Sustom Oligos</i> 90 [¢] _{base} No Set-up Fee! 900 90° No Set-up Fee! 900° No Set-up Fee! 900° No Set-up Fee! 900° No Set-up Fee! 90° No Set-up Fee! 90° 90° No Set-up Fee! 90° No Set-up Fee! 90° 90° No Set-up Fee! 90° 90° 90° 90° 90° 90° 90° 90°
C O Te A	eystone Labs <i>Sustom Oligos</i> Prder: www.keydna.com 1: 800-788-4362 • Fax: 800-786-4362 <i>BioSource International, Inc. Company</i> Circle No. 19 on Readers' Service Card PEG Derivatives for Pharmaceutical and
C O Te A	eystone Labs <i>Sustom Oligos</i> 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 10 10 10 10 10 10 10 10 10 1
C O Te A	eystone Labs <i>Sustom Oligos</i> Prder: www.keydna.com 1: 800-788-4362 • Fax: 800-786-4362 <i>BioSource International, Inc. Company</i> Circle No. 19 on Readers' Service Card PEG Derivatives for Pharmaceutical and
C O Te A	eystone Labs <i>Sustom Oligos</i> 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 90 ^c /base No Set-up Fee! 90 ^c /base 90 ^c /base No Set-up Fee! 90 ^c /base 90 ^c /base No Set-up Fee! 90 ^c /base 90 ^c /base
C O Te A	eystone Labs <i>Sustom Oligos</i> 90%base No Set-up Fee! 90 90%base No Set-up Fee! 90 90%base No Set-up Fee! 90%base No Set-up Fee! BioSource International, Inc. Company Circle No. 19 on Readers' Service Card PEG Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy,
C O Te A	eystone Labs <i>Sustom Oligos</i> Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 <i>BioSource International, Inc. Company</i> Circle No. 19 on Readers' Service Card PEG Derivatives for Pharmaceutical and Biotechnical Applications <i>Activated for Protein Modification</i> Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives <i>Exclusive Products:</i>
C O Te A	eystone Labs Sustom Oligos Prder: www.keydna.com A: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA,
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω-Amino-α-Carboxyl,
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω-Amino-α-Carboxyl, ω-NHS-α-Vinylsulfone
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω-Amino-α-Carboxyl, ω-NHS-α-Vinylsulfone and PEG2-NHS
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up Fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω-Amino-α-Carboxyl, ພ-NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω -Amino-α-Carboxyl, ω -NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure Derivatives, GMP, Bulk and Custom
C O Te A	eystone Labs Sustom Oligos 90 (hase No Set-up Fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω -Amino-α-Carboxyl, ω -NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure Derivatives, GMP, Bulk and Custom Synthesis Available
C Te A	eystone Labs Sustom Oligos 90 ^(hase) No Set-up Fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω -Amino-α-Carboxyl, ω -NHS-α-Vinylsulfone and PEG2-NHS Cbromatographically Pure Derivatives, GMP, Bulk and Custom Synthesis Available Shearwater Polymers, Inc.
C Te A	eystone Labs Sustom Oligos 90 (hase No Set-up Fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω -Amino-α-Carboxyl, ω -NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure Derivatives, GMP, Bulk and Custom Synthesis Available
C Te A	eystone Labs Sustom Oligos 90 (hase No Set-up fee! Prder: www.keydna.com 4: 800-788-4362 • Fax: 800-786-4362 BioSource International, Inc. Company Circle No. 19 on Readers' Service Card Derivatives for Pharmaceutical and Biotechnical Applications Activated for Protein Modification Monofunctional Methoxy, Homobifunctional Methoxy, Homobifunctional Derivatives Exclusive Products: Vinylsulfone, Aldehyde, SPA, ω -Amino-α-Carboxyl, ω -NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure Derivatives, GMP, Bulk and Custom Synthesis Available Shearwater Polymers, Inc. (800) 457-1806 (US) 1112 Church Street

Circle No. 11 on Readers' Service Card



Circle No. 10 on Readers' Service Card









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[®], and Texas Red[®]. 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 are 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.

Custom DNA Synthesis Prices		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	\$25	HEX, TET, 6-FAM	\$70
0.00 μποιο	40.00	40.00	ocpilatex	nee	Biotin	\$50	Phosphate	\$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	\$70	ROX	\$125
ι.ο μποις	φ£.40	420.00	TAUL	110111 \$40	Digoxigenin	\$125	TAMRA	\$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. 62 on Readers' Service Card

Assays for Markers of Oxidative Stress & Nitric Oxide Production

Nitric Oxide: the double-edged sword

Nitric Oxide (NO) has been implicated in a multitude of broad physiologic and pathophysiological conditions. R&D Systems offers 3 assays for the detection of Nitric Oxide production by measuring the accumulation of its stable degradation products Nitrite (NO_2^-) and Nitrate (NO_3^-).

NO Physiologic Roles

- Protection against oxidative damage
- Inhibition of platelet aggregation
- Non-specific immunity
- Vascular tone

NO Pathologic Roles

- Inflammatory/autoimmune diseases
- Sepsis and multiorgan failure
- Ischemic brain damage
- Dementia

Nitric Oxide Assays

NO₂⁻/NO₃⁻ Catalog Number DE1500 Two assay procedures allow the measurement of the individual concentrations of NO₂⁻ and NO₃⁻.

Total NO

Catalog Number DE1600

Provides sufficient reagents to assay two plates (192 wells) for NO2

NO (non-enzymatic) Catalog Number NO-540

For the determination of NO based on the chemical reduction of NO₃⁻ to NO₂⁻ by granulated cadmium.

Free Radical Assays

Factor	Catalog Number
Glutathione	GSH-400
Cellular Glutathione Peroxidase	GPX-340
Glutathione Reductase	OX-GR
Plasma Glutathione Peroxidase	GPX-EIA
H ₂ O ₂	H202-50
Lactoferrin	LFN-EIA
Lipid Peroxidation	LP0-586
Myeloperoxidase	MPO-EIA
Superoxide Dismutase	SOD-525

Eicosanoid & Cyclic Nucleotide Assays Also Available

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES.

North America R&D Systems, Inc.

614 McKinley Place NE Minneapolis, MN 55413, USA Tel: 612 379-2956 Fax: 612 379-6580 info@rndsystems.com

Europe R&D Systems Europe Ltd. 4-10 The Quadrant, Barton Lane Abingdon, OX14 3YS, UK Tel: +44 (0)1235 551100 Fax: +44 (0)1235 533420 info@rndsystems.co.uk

R&D Systems GmbH Borsigstrasse 7 65205 Wiesbaden, Germany Tel: +49 (0)6122 90980 Fax: +49 (0)6122 909819 infogmbh@rndsystems.co.uk

Germany

22 909819 Norge: 800 11033 systems.co.uk Sverige: 020 79 31 49 Switzerland: 0800 55 2482

Europe Free Phone

Danmark: 80 01 85 92

France: 0800 90 72 49

Nederland: 060 225607

Belgique/België: 0800 10 468

Circle No. 39 on Readers' Service Card

