



# Bioinformatics

designed with you in mind...

...and making that  
the standard

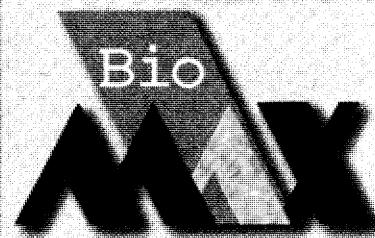
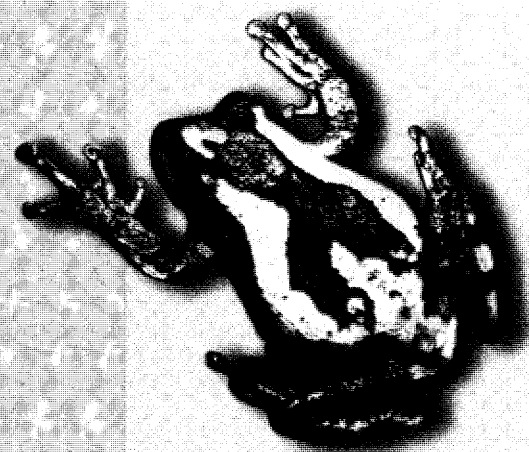
- analyze DNA and protein sequences
- search and integrate databases
- analyze gene expression data
- cluster and assemble ESTs
- annotate genome databases
- etc.

Biomax provides teams of highly experienced bioinformatics specialists able to quickly identify management and analysis requirements and deliver tailored, user-friendly solutions.

No matter what the task, outsourcing with Biomax will result in more efficient, sophisticated and economical bioinformatics tools and solutions.

CALL BIOMAX TODAY for bioinformatics  
designed with you in mind

Tel.: + + 49 (0)89/895574-50  
[www.biomax.de](http://www.biomax.de)



Biomax Informatics AG  
Lochamer Str. 11  
82152 Martinsried  
Germany

# NEW PRODUCTS

## CalculationCenter Wolfram Research

\$295  
Champaign, IL  
800-965-3726  
[www.wolfram.com/  
products/calculationcenter](http://www.wolfram.com/products/calculationcenter)

## MATHEMATICAL FRIEND

Although Mathematica is widely used by a select group of professionals, it is a good example of a technical software product that is underutilized because its interface is difficult to learn. The level of mathematics and the programming language it uses are often very challenging for the novice or non-mathematician. To make Mathematica a less-intimidating application, the staff at Wolfram has developed CalculationCenter, a program that uses Mathematica technology but with a different interface.

The program comes on a single CD-ROM and takes 85 MB of hard disk space. New users can orient themselves in minutes by a quick tour available from the opening screen. Detailed information on mathematical procedures and program use are located under the on-screen help files or online at Wolfram's extensive Web site.

CalculationCenter queries the user as the first step in tackling a problem. For example, CalculationCenter may start by asking the type of math (e.g., calculus/integral/indefinite integral), followed by necessary accompanying information, such as the function to integrate and the variable to integrate over. For series expansion about a specific point, users simply fill in the blanks: the function to expand, the variable for expansion, the point to expand about, and the number of terms to be calculated. If desired, users can see the code provided by CalculationCenter by selecting the Convert Text Input button. Of course, any entry can be modified or recalculated. All of the most commonly used mathematical routines are available, including calculus, algebra, and matrix manipulation.

Graphics and data plotting are also greatly simplified. Users type in a function and select the Visualize Data Automatically button. The SmartPlot box appears along with a Calculate button, which, when clicked upon, yields the function's plot. The default plotting limits, as well as the plot type, can be easily changed. Many styles of output are available. Colorful three-dimensional plots are just as simple to construct as one-dimensional function graphics. The help browser provided with the program is comprehensive and quickly provides information about the function and definitions needed to understand the analysis.

CalculationCenter makes excellent use of Mathematica's powerful calculating algorithms and greatly simplifies the way calculations are performed. CalculationCenter will be of great use to students, engineers, and research scientists needing to model processes, crunch data, and create integrated reports.

—John A. Wass

Architect Immunochemistry R&D, Abbott Laboratories, Abbott Park, IL 60064, USA.  
E-mail: [John.Wass@add.ssw.abbott.com](mailto:John.Wass@add.ssw.abbott.com)

## Alpha Innotech

For more information call  
800-795-5556 or  
**circle 139**  
on the Reader Service Card  
[www.Alphainnotech.com](http://www.Alphainnotech.com)

## GEL DOCUMENTATION AND ANALYSIS SYSTEM

The AlphaDigiDoc 1000 is an economical gel documentation system suitable for users with a limited budget who prefer to use their own computer or transilluminator to create a compact and portable gel imaging system. Features include the ability to create vibrant, 2.1-megapixel-resolution 8-bit grayscale or 24-bit color images with exceptional quality and details. A compact

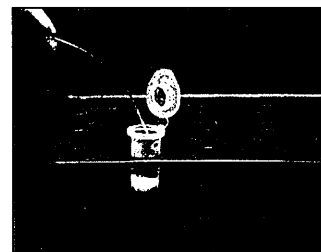
darkroom hood makes the instrument suitable for labs with limited bench space, while the advanced light cabinet provides flexibility and upgradeability. The image acquisition software delivers zoom lens, resolution, and exposure control, and features automatic image enhancement, analysis, and data management tools. An optional large format digital printer can provide hard copies in seconds.

## Physitemp

For more information call  
800-452-8510 or  
**circle 140**  
on the Reader Service Card  
[www.physitemp.com](http://www.physitemp.com)

## TEMPERATURE MICROPROBES

An extensive range of flexible Teflon microprobes is available. These fast-response probes can be used for implantation in brain and muscle tissue, blood vessels, spectrophotometer cuvettes, water baths, and rectally in neonatal mice, and more. Custom probes are available for special applications. They are strong, flexible, and completely sealed. They can be autoclaved or sterilized by use of gas or Cidex. They are available with a sensor lead as small as .009 inches in diameter. They are accurate to 0.1°C within the physiological range.



## BioCat

For more information call  
+49 (0) 6221-5858-44 or  
**circle 141**  
on the Reader Service Card  
[www.biocat.de](http://www.biocat.de)

## QUANTITATIVE RT-PCR AND PCR

A new product line is available for quantitative polymerase chain reaction (PCR) and reverse transcriptase-PCR (RT-PCR). Heterologous competitive internal standards are offered as a custom service for quantitative PCR (competitor DNA) and quantitative RT-PCR (competitor RNA). The researcher provides the sequence of the forward and the reverse primer for an experiment, and BioCat delivers the specific competitor. Complete competitor DNA and competitor RNA are available in eight size ranges.

## Lighttools Research

For more information call  
760-632-0677 or  
**circle 142**  
on the Reader Service Card  
[www.lighttools.com](http://www.lighttools.com)

## FLUORESCENT EXCITATION SOURCE

The LT-9800 Illumatool Fluorescent Excitation Source is designed to be a cost-effective solution for viewing fluorescent molecules with a microscope. It provides a very bright cool light source for excitation of fluorescent dyes. Features include variable illumination control from 0% to 100%, adjustable spot size, and wavelength control between 390 nm and 750 nm or 100% white light. It works with a large assortment of microscopes and macrosopes.

## Bioanalytical Systems

For more information call  
765-497-8458 or  
**circle 143**  
on the Reader Service Card  
[www.epsilon-web.net](http://www.epsilon-web.net)

## ELECTROCHEMICAL LC DETECTOR

The epsilon e5 electrochemical liquid chromatography (LC) detector features four digital channels in radial- and cross-flow arrays, and pulsed amperometric detection with up to 16 definable steps. Optically isolated circuitry and 20-bit data resolution, along with combined digital and analog filtering,

CONTINUED ON PAGE 1735

**www.sciencecareers.org**

result in state-of-the-art detection limits. The system includes built-in computer control and data analysis, including provision for up to two external detectors, control of isocratic and gradient pumps, and programmable signals for integration with other LC equipment such as autosamplers. Internet functions include software upgrades, an online manual, and remote monitoring.

#### Brinkmann Instruments

For more information call  
516-334-7500 or  
**circle 144**  
on the Reader Service Card  
www.brinkmann.com

#### REPEATER PLUS PIPET

The Repeater Plus pipet offers up to 100 repetitive dispensings with 104 volume selections from 1.0  $\mu$ l to 10 ml. It offers 20 different volumes per tip, snap-in mounting, and push-button tip selection. It automatically recognizes Combitip Plus Tips, which are available

in eight sizes. The tips are available in a choice of packaging: non-sterile, sterile, and Eppendorf Biopur, which is sterile and free of ribonuclease, DNA, ATP, and pyrogen.

#### Thermo Savant

For more information call  
800-634-8886 or  
**circle 145**  
on the Reader Service Card  
www.thermosavant.com

#### HIGH-CAPACITY CENTRIFUGAL CONCENTRATOR

The Discovery SpeedVac is a high-capacity, high-throughput centrifugal concentrator designed for combinatorial chemistry and its associated solvents. High-quality components handle

aggressive solvents such as trifluoroacetic acid, acetonitrile, dimethyl sulfoxide, methanol, and methylene chloride. Interchangeable multilevel rotors can hold up to 120 shallow-well Microtiter plates or whole test tube racks in a single run. The compact design allows the complete unit to fit inside a conventional walk-in fume hood without modification. A built-in, oil-free, maintenance-free vacuum pump and a 7.5-liter capacity cold trap make it a complete, stand-alone system.

#### Barnstead/Thermolyne

For more information call  
800-553-0039 or  
**circle 146**  
on the Reader Service Card  
www.barnstead.com

#### INCUBATOR

The Lab-Line Imperial III Incubator is available in gravity or convection models. All controls are positioned at eye level for convenient monitoring. An easy-to-read LED displays chamber temperature. A tempered-glass inner door allows samples to be inspected

without disturbing the chamber environment. It is available in three chamber capacities with electrical outlets inside to run shakers, stirrers, or rotators.

#### Bio-Rad Microscience

For more information call  
+44 (0) 20 8328 2111 or  
**circle 147**  
on the Reader Service Card  
www.microscopy.bio-rad.com

#### LASER SCANNING MICROSCOPE SYSTEM

The Radiance2100 laser scanning microscope system offers flexibility because it can be progressively upgraded from single-channel confocal to multi-channel multiphoton systems. Confocal

microscopy enables the acquisition of optical section images through a fluorescence biological sample so that only light that is in focus is collected. The Radiance2100 alignment-free laser-point scanning system makes use of this principle with an innovative scanning design based on patented opto-electronics. Maintenance-free, fixed alignment optics provides reproducible confocal imaging performance. Each system offers a choice of emission filters that provide high spectral resolution. As an example of the system's flexibility, a researcher could start with a

single-channel system with a four-line argon laser and progressively upgrade it by adding further detectors and lasers such as HeCd, green HeNe, and red diode.

#### JM Science

For more information call  
716-774-8706 or  
**circle 148**  
on the Reader Service Card  
www.jmscience.com

#### REFRACTIVE INDEX DETECTOR

The Shodex model RI-101 is a refractive index detector that features a full-color liquid crystal that allows the chromatographer to easily check the detector status as well as monitor the detector baseline in real time. Temperature

can be set from 30°C to 50°C in 1°C increments. The detector has a solvent leak sensor that can generate an output signal that will shut down the pump. A complete series of input/output signal terminals and an RS-232 port allow easy integration with any high-performance liquid chromatography system.

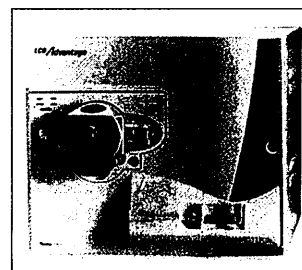
#### Thermo Finnigan

For more information call  
408-965-6577 or  
**circle 149**  
on the Reader Service Card  
www.thermofinnigan.com

#### BENCHTOP ION TRAP LC/MS

The LCQ Advantage is a compact, benchtop ion trap liquid chromatography/mass spectrometer (LC/MS) based on the manufacturer's successful LCQ Class mass spectrometer. A new robust orthogonal ion source significantly enhances sensitivity. This new source reduces chemical noise and allows analysis of compounds in dirty matrices without compromising sensitivity. The probes can be moved in two dimensions, offering signal optimization and flexibility for a wide variety of applications and LC flow rates.

The source also incorporates Ion Sweep technology, which aids in sample desolvation and the reduction of chemical noise, which improves spectral quality and ion-source ruggedness. The LCQ Advantage can be easily coupled with the Surveyor LC System control to provide a powerful analytical solution for drug discovery, process monitoring, and combinatorial chemistry. A new nanospray source accessory provides low flow rates and high sensitivity for proteomic or sample-limited applications.



#### PerkinElmer

For more information call  
800-762-4000 or  
**circle 150**  
on the Reader Service Card  
www.perkinelmer.com

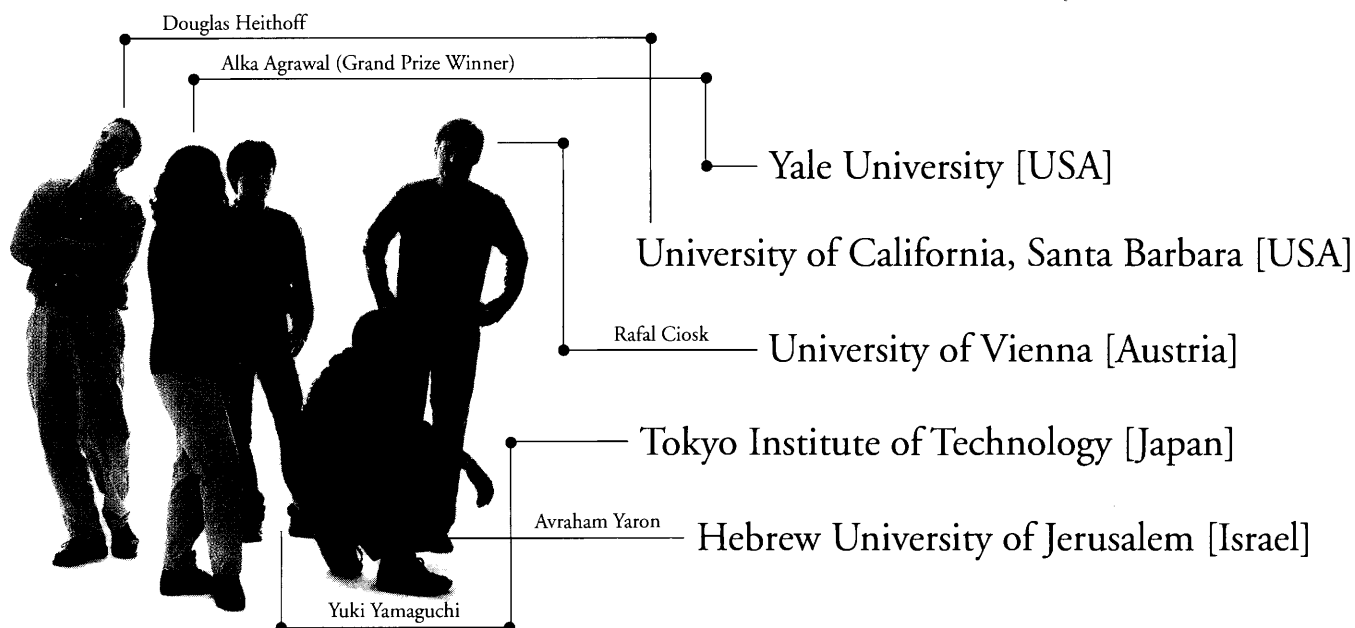
#### LITERATURE

The OmniFLEX MALDI-TOF MS is a six-page brochure on the Perkin-Elmer-Bruker Daltonics OmniFLEX matrix-assisted laser desorption/ionization-time-of-flight mass spectrometer (MALDI-TOF MS). The brochure illustrates this system's ability to provide the sensitivity, resolution, and mass accuracy of larger and more complex systems in a benchtop model. The literature also conveys the versatility of the system in the areas of method development, quality analysis and control, clinical trials, and production testing in the pharmaceutical, biotechnology, and polymer industries.

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.

# Award-winning

research completed at:



(PUT YOUR SCHOOL ON NEXT YEAR'S LIST.)

Did you complete your Ph.D. in molecular biology\* in 2000? If so, then here's a chance to gain international acclaim for yourself and the research being conducted at your school. Just describe your work in a 1,000-word essay. Then submit the essay for entry into the 2001 Amersham Pharmacia Biotech & *Science* Prize.

The essay will be reviewed by a panel of distinguished scientists, who will then select one grand prize winner and up to seven other winners.

The grand prize winner will:

- get his or her essay published in *Science*
- receive US\$25,000
- win a trip to attend the award ceremony

AMERSHAM PHARMACIA  
BIOTECH & SCIENCE  
**Prize**  
FOR YOUNG  
SCIENTISTS

All other winners will receive US\$5,000 and a trip to the award ceremony. Your essay may be submitted in English, French, German, Spanish, Japanese or Chinese (Mandarin). The closing date for entries is July 16, 2001. The Prize has existed since 1995 and is offered as a means to motivate students in the hope that they will continue their scientific research efforts.

Put your work (and face) in *Science*. Go to [www.apbscienceprize.org](http://www.apbscienceprize.org) where you can read the full details as well as submit your entry form. Or use the contact details (left) to find out more.

Young Scientist Prize Selection Committee  
*Science*  
1200 New York Avenue, NW  
Room 1049B  
Washington, DC 20005  
USA

Young Scientist Prize Selection Committee  
*Science* International  
Bateman House  
82-88 Hills Road  
Cambridge, CB2 1LQ  
UNITED KINGDOM

\* For the purpose of this prize, molecular biology is defined as "that part of biology which attempts to interpret biological events in terms of the physico-chemical properties of molecules in a cell" (McGraw-Hill Dictionary of Scientific and Technical Terms, 4th Edition).

**Science**

  
amersham pharmacia biotech

## Classified Advertising

For full details on advertising rates, deadlines, mechanical requirements, and editorial calendar go to [www.sciencecareers.org](http://www.sciencecareers.org) and click on How to Advertise

### UNITED STATES

#### Display Classified Advertising

Bren Peters (Mid-Atlantic, Midwest)  
Tel: 202-326-6541  
Kathleen Clark (Southeast, Canada)  
Tel: 202-326-6555  
Jill Steinberg (Northeast)  
Tel: 212-496-1264  
Kristine von Zedlitz (West Coast)  
Tel: 415-956-2531  
Fax: 202-289-6742  
E-mail: [science\\_displayads@aaas.org](mailto:science_displayads@aaas.org)

#### Line Classified Advertising

Jody Fenty  
Tel: 202-326-6722  
Christina Geiger  
Tel: 202-326-6532  
Fax: 202-289-1451  
E-mail: [science\\_classifieds@aaas.org](mailto:science_classifieds@aaas.org)

#### Online Classified Advertising

Beth Dwyer  
Tel: 202-326-6534  
Fax: 202-289-6742  
E-mail: [bdwyer@aaas.org](mailto:bdwyer@aaas.org)

[www.sciencecareers.org](http://www.sciencecareers.org)

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

### EUROPE

#### Display, Line, 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](mailto:european_ads@science-int.co.uk)

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

### MEETINGS/ANNOUNCEMENTS

Kathleen Clark  
Tel: 202-326-6555  
Richard Walters  
Tel: +44 (0) 1223 326 500

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

# The Science Meetings & Announcements Database

HELP TO ADVERTISE FEEDBACK

## Meetings and Announcements

Employer Links | Career Fairs | Resumes | Advice | Meetings |

Search the **NEW** Meetings & Announcements Database

2001 European Events Calendar

Getting the word out to scientists about your event

To list your meeting announcement in *Science* and on [sciencemeetings.org](http://sciencemeetings.org) please contact:

**NORTH AMERICA**  
Kathleen Clark  
Phone: 202-326-6555  
FAX: 202-289-6742  
E-mail: [klark@aaas.org](mailto:klark@aaas.org)

**A comprehensive listing of events, grants announcements, courses & training, and more... in print and online.**

When you run your ad in *Science*, it is automatically posted in the Meetings & Announcements database at **Sciencemeetings.org**. This online posting receives a free hyperlink from any e-mail or web address. The Meetings & Announcements page is searchable by keyword, discipline, geographic region, or category/subject. It doesn't get any easier.

## Is your event listed?

In the U.S. call Kathleen Clark at 202 326-6555

In Europe ring Richard Walters on +44 (0) 1223 326 500

**Science**  
[www.sciencemeetings.org](http://www.sciencemeetings.org)



# DATA HANDLERS IN DEMAND

SUCCESSFUL SEQUENCING OF THE HUMAN GENOME HAS INCREASED THE ALREADY STRONG DEMAND FOR INDIVIDUALS WHO CAN ORGANIZE, ANALYZE, AND INTERPRET DATA. THE RESULT: NEW CAREER OPPORTUNITIES FOR SCIENTISTS WHO HAVE COMPUTER SKILLS AND SOME UNDERSTANDING OF LIFE SCIENCE.

BY PETER GWYNNE

**M**ore than any other product, modern life science creates data. Current efforts to sequence the genomes of humans and other species create a wealth of information that, properly applied, will lead to fresh understanding of the ways in which living organisms work and new means of treating them when they go awry. Getting from the data to those conclusions requires informatics: the application of computer technologies and methodologies to scientific results. The huge amount of data emerging from life science laboratories has created a strong need for scientists who specialize in this previously arcane field.

Informatics can take several forms. Scientists who deal with small molecules, for example, rely on cheminformatics to interpret their data. However bioinformatics, which applies the approaches of computer technology to complex molecules and entities, has emerged as the type of informatics in greatest demand in life science laboratories. Increasingly, bioinformatics itself is breaking into subspecialties. Most significant problems now require teams of scientists with different skills to solve them.

Specialists in bioinformatics come from two main sources: individuals trained in life science fields who can understand computers and computing techniques, and experts in computer science who have some knowledge of life science. Whatever their training, such specialists are in short supply. Employers offer highly competitive salaries and benefits to attract the best. Here we discuss the need for informatics specialists with representatives of an academic institute, a large pharmaceutical corporation, and a biotechnology company.

Roche Center for Medical Genomics, VARIAGENICS, Virginia Bioinformatics Institute



**BLACKSBURG, Virginia:** The Commonwealth of Virginia created the Virginia Bioinformatics Institute last year as a central facility for the subject. "The Institute is really a bridge across the commonwealth between public and private interests," explains Institute director Bruno Sobral. "We believe that the

future of biology is intimately tied to bringing together wet chemistry experimentation with computer modeling. So we are bringing those things together in one program."

Based on the campus of the Virginia Polytechnic Institute, the new Institute serves organizations throughout the state. "We're a research partner not only to university departments but also to companies," says Sobral. "By working with manufacturers of wet tools, we can help develop the next generation of equipment — making instrumentation more compatible with robots, for example."

The Institute will expand rapidly. "Our four-year plan calls for us to have 33 hard money faculty members at all levels plus 90 postdoctoral fellows and research students, professional staff, and technicians. We expect to generate another 200-300 soft money positions with the 120 hard money spots, for a total of 300-500 positions by 2004," Sobral says. "We're looking for senior people with experience and more junior scientists with an interest in biology who will find a way to learn about the field." Employees will come from all aspects of science and particularly quantitative disciplines. "As faculty we have already hired mathe-

maticians and physicists as well as molecular biologists, and geneticists like myself," he continues. "We expect to hire engineers."

Individual employees will develop their own specialist approaches to bioinformatics. And they will be expected to participate in teams tackling complex problems. "The first, nonnegotiable aspect of any hire is being a good scientist," says Sobral. "But we explore applicants' team capabilities just as seriously. Scientists must like working in teams. The majority of problems we will tackle won't be solved by individuals."

Recognizing the lack of competent specialists in bioinformatics, the Institute has taken steps to attract the best candidates. "We have a very flexible salary structure that allows us to compete with companies," Sobral says. "We have a very attractive package in terms of research. Because we are part of a university, we can give incoming scientists access to an academic infrastructure. And we offer a really important quality of life in the Appalachians that suits many people very well."

Sobral offers differing advice to life scientists and physical scientists interested in bioinformatics careers. "Biologists should learn as many quantitative skills as they can. Quantitative scientists should team up with biologists who have interesting problems," he suggests. "Both should recognize that they will be expert in one side or the other. Bioinformatics is a team profession. You use team members' skills to get a synergistic effect."

Aventis Pharmaceuticals



Our challenge is life...conquering disease, one person at a time.

# What do you want to be remembered for?

There are many different things you can do within your life that will leave a lasting impression. One is enhancing the health and well-being of others. By choosing a career with **Aventis**, you are choosing to reach out to millions and make a difference. With dynamic pharmaceutical products and services, our reputation around the world is that of a leading health care pioneer. We continue to build upon this distinction by attracting individuals who share our passion for innovation and improving the quality of life.

## **Bioinformatician Job Code: DIA2698**

You will be responsible for setting up automated genomic database searches for high throughput DNA sequences from subtracted libraries and various gene-expression profiling experiments. Within the department you will be responsible for effective database mining and for the bioinformatics support of research activities in the Immunology Platform. Additionally, you will be the liaison between Immunology Platform, the Core Bioinformatics group and the IT group. Ph.D. in bioinformatics or molecular biology as well as 3 plus years of experience in bioinformatics.

## **Bioanalyst Job Code: DIA2037**

You will be responsible for analysis of information from gene expression profiling, high-throughput sequencing, and public/proprietary databases for discovery of targets in the inflammatory disease area. You will work closely with scientists in the Respiratory/RA department, Core Biotechnology, and Bioinformatics groups to identify new targets for downstream validation. Experience with PERL, Unix, HTML, sequence analysis tools, and sequence databases is required. The ideal candidate will have additional experience in the analysis of expression data. Strong communications skills are required. Knowledge of asthma, rheumatoid arthritis, and/or inflammation is desirable.

## **Project Manager, Computational Biology Job Code: DIA2452**

You will be responsible for project management of software systems as they progress through the software development life cycle, both for internally developed systems and those acquired from third parties. This includes defining stakeholders, soliciting and refining scientific requirements from Aventis scientists, mapping requirements to interfaces, and eventually, architectures. Initiate and lead internal teams of engineers and computational biologists in the development, test, and release of internally developed systems and in the evaluation and test of external systems. Develop and oversee plans for integration of third party systems. Requirements: Ph.D. in biology or equivalent area or M.S. with 3 years relevant experience with advanced sequence analysis tools including EST clustering and assembly algorithms, gene production programs, and methods for identifying protein family members. Two years project management experience in a team environment working on software development is essential. In-depth understanding of software design & development process, including object-oriented development approaches using UM as well as a working knowledge of the drug discovery process, especially target identification and validation required. Excellent communication skills a must. Knowledge of multivariate statistics desirable.

## **Analyst, Genome Informatics Job Code: DIA2374**

You will be responsible for evaluation, use, integration, and training of advanced sequence analysis tools and data sets. You will work closely with investigators in the identification of disease-relevant pharmaceutical targets using assembled EST, annotated genomic, and proprietary sequences. Act as scientific liaison between the bioinformatics development group and the investigators defining new scientific requirements and identifying & implementing tools that integrate data enabling target selection. Evaluate, disseminate and test new systems created or proposed to meet these requirements. Background in bioinformatics, biophysics, or molecular biology with 1-3 years full time bioinformatics experience in academia or industry required. Must have basic knowledge of sequence analysis tools and public DNA/protein databases. Must also be familiar with UNIX operating system and relational database technology. Considerable programming experience in Perl and one of the following languages: C, C++, Java.

## **Analyst, Informatics Operations Job Code: DIA2451**

You will be a team member of informaticians responsible for operational aspects of Aventis' scientific computing platform, and for the day-to-day operation of download systems, sequence analysis pipelines, EST clustering systems, genome analysis pipelines and other informatics systems. Interface with Aventis' scientific and informatics teams to define scientific and operational guidelines to maximize scientific value. Troubleshoot scientific and engineering issues as they arise. Act as internal resource for development teams and as scientist on systems operations. Work with development teams on release process to ensure smooth transitions of systems from test to production phase. Requirements: B.S. in computer science with biology minor or B.S. in biology with significant computer science training. Experience with Perl, SQL, and Oracle or equivalent RDBMS as well as knowledge of sequence analysis methods, algorithms, systems, and SUN Solaris required. Java experience desirable.

Apply online at Careers at Aventis, the Aventis Recruitment Center:

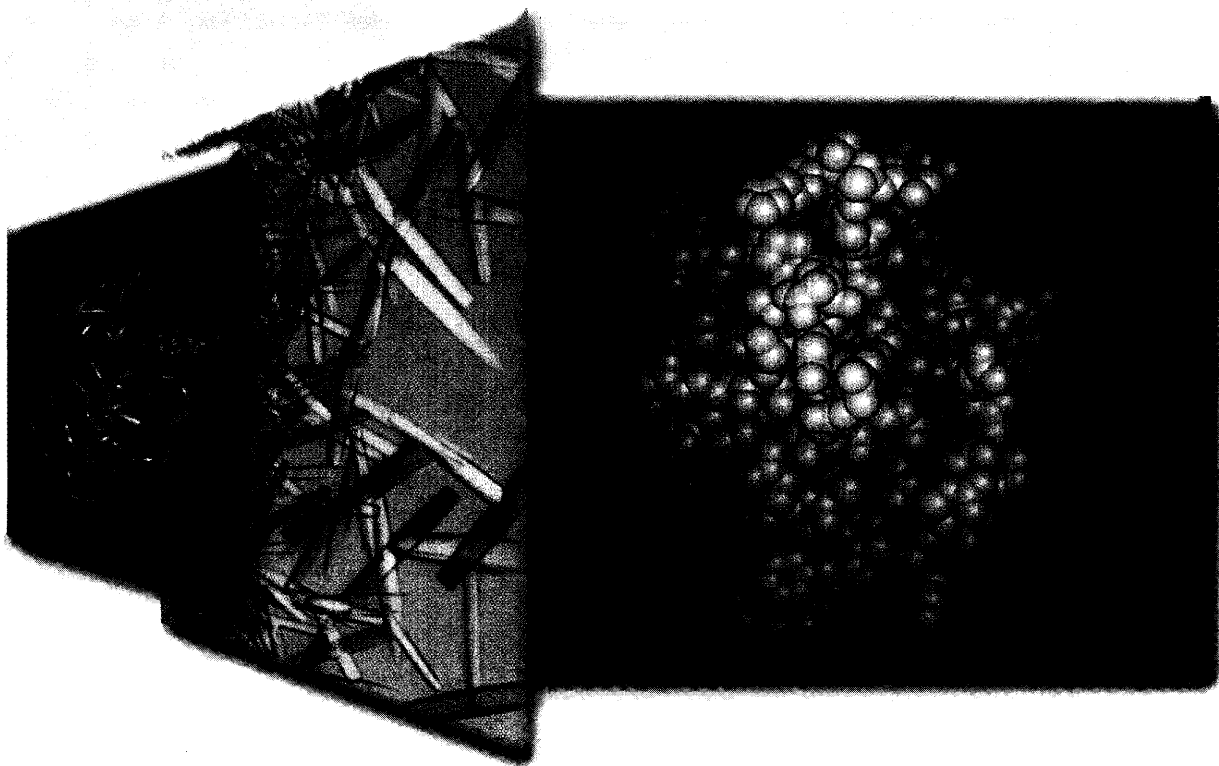
**[www.aventis.com](http://www.aventis.com)**

(please include job code when applying)

We reward our associates with exceptional benefits including medical/dental, retirement plans, holiday/floating holidays, work/life benefits and the opportunity to learn and grow.

Aventis Pharmaceuticals is proud to be an equal opportunity employer committed to a diverse workforce.





## What we have in common sets us apart.

### **Exciting opportunities for Informatics professionals.**

At Amgen, we believe success can only be achieved when every individual within an organization shares a common aspiration. Amgen aspires to be the best human therapeutics company in the world. Sometimes, that means creating new and different approaches to drug discovery.

We're also aware that our vision can only be realized when the technology we use receives the critical attention it requires. That's why we've made a major commitment at all levels in the area of Informatics. We know that in order to gain a competitive edge and achieve scientific excellence, leading-edge technology and a highly collaborative team are essential.

If you share our vision, we invite you to find out more about us at [www.Amgen.com](http://www.Amgen.com). You'll see why *Fortune* magazine has named us one of the "100 Best Companies To Work For" four years in a row and one of "America's Most Admired Companies."

**For immediate consideration, e-mail your resume to [tevarts@amgen.com](mailto:tevarts@amgen.com) (Ad Code 768). Or mail your resume to: Amgen Staffing, (Ad Code 768) P.O. Box 2569, Thousand Oaks, CA 91319-2569.**

# AMGEN®

Amgen Inc.  
Thousand Oaks, CA

[www.Amgen.com](http://www.Amgen.com)

EOE/AA Employer M/F/D/V

© 2001 Amgen Inc. All rights reserved



**Better world.  
Better careers.**

## Our global commitment of \$2.5 billion is advancing science through research.

Enter the world of Novartis Pharmaceuticals. Our dedication to R&D is the driving force powering our pharmaceuticals pipeline. And our pipeline is stronger than ever - connecting the world to breakthrough treatments that help people live longer, healthier lives. Today, we're introducing innovative treatments for an ever-increasing variety of diseases and disorders. From Alzheimer's and epilepsy to cancer and Parkinson's. And you could be an integral part of the innovation.

With a global investment of \$2.5 billion, we're assembling leading-edge international research teams from a broad spectrum of specialties and seek several scientists to further strengthen our competencies in the field of computational analysis of biological experiments. **Join our Basel, Switzerland; Summit, NJ; Gaithersburg, MD; Horsham, UK and Vienna, Austria operations and be the key to tomorrow's discoveries.**

### Computational Biologists – Pharma Research

Incumbents will play an integral role in the planning and analysis of studies in molecular biology, genomics and genetics, and will ensure that the knowledge created will be registered with our global biological knowledge bases.

Qualifications will include an excellent background in biology, fluency in the use of computational methods applied to biology, using resources on both intra and internet. Must be goal oriented, team-players with excellent communications skills, and able to translate theoretical concepts to experimentally oriented scientists. Academic education in natural sciences or related areas required. Experience with database annotation is an asset, while familiarity with programming languages, relational databases and statistical methods are a plus. Must be fluent in English.

At Novartis Pharmaceuticals, we offer a highly competitive benefits package, as well as leadership development initiatives. Find out how fulfilling your career can be.

Please e-mail your resume as a 'Microsoft Word' attachment to: **rd@recruitmentsolutions.com**. Include in your e-mail message the following information:

1. In the subject area and in the main copy of your e-mail, reference the **Requisition #** for sorting purposes as follows:  
For positions in Basel, Switzerland indicate **Requisition #10321**  
For positions in Summit, NJ indicate **Requisition #10320**  
For positions in Gaithersburg, MD indicate **Requisition #10322**  
For positions in Horsham, UK indicate **Requisition #10324**  
For positions in Vienna, Austria indicate **Requisition #10323**
2. In a brief note or cover letter, indicate where core competencies align with requisition.

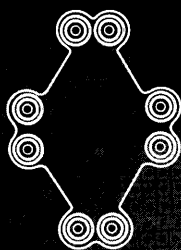
As an alternate method of submission, fax your resume and cover letter to: 800-343-8850. If you would like to know more about openings available at Novartis, please visit our website at: **www.joinnovartis.com**. We are an equal opportunity employer M/F/D/V.



# NOVARTIS

The Spirit of Discovery

[www.joinnovartis.com](http://www.joinnovartis.com)



*Vision...Leadership...Discovery*

# EXELIXIS

Exelixis, Inc. is a leader in the discovery of high-quality novel targets for several major human diseases, and a leader in the discovery and development of new drug therapies specifically for cancer and other proliferative diseases. Our mission is to leverage our integrated discovery platform to increase the speed and the quality of pharmaceutical and agricultural product discovery and development.

## **Director, Preclinical Development**

You will design, lead and monitor pre-clinical development activities conducted at universities, CROs and our facility to advance our development compounds to IND status. Evaluating strategies for selecting studies, you will analyze data and report study results, provide leadership to multi-disciplinary pre-clinical development teams and manage pre-clinical development compounds from Exelixis' internal drug discovery efforts. You will be responsible for writing and reviewing regulatory submissions (US and international) and assisting in subsequent IND filings and early clinical trial "proof of concept" studies. In addition, working with drug discovery, research, clinical and regulatory groups on special projects, you will review drug candidates for in-licensing. Requires a PhD in Chemistry, Pharmacology, Toxicology or equivalent and 8-10 years experience in drug discovery, pre-clinical development and project management in the pharmaceutical industry. Supervisory experience with a multidisciplinary team is advantageous. Job #: 01-76

## **Sr. Research Scientist, Pharmacology**

You will conduct *in vitro* and *in vivo* efficacy and pharmacology studies. Responsible for the implementation and development of *in vivo* oncology and angiogenesis related animal models. Manage a pharmacology lab focused mainly on *in vivo* efficacy and high-throughput screening PK studies for determination of the mechanisms of action and characterization of selected leads. Requires a PhD or equivalent and 2+ years experience in a cancer research lab. Comprehensive understanding of angiogenesis, signal transduction and apoptosis pathways, and hands-on experience with *in vivo* model development required. Experience with functional genomics desired. Industry experience is preferred. Excellent teamwork and communication skills are also required. Job #: 01-74

## **Research Scientist, Informatics**

You will participate in the design, development, and implementation of software tools and database resources for the computational aspects of either target or drug discovery including the integration of in-house and external tools. Your responsibilities will include data analysis, modeling, and mining for large collections of DNA sequences, protein sequences, and/or compound structures, and assembling the data sets underlying these resources. You will focus on prediction of properties and cellular function of genes, proteins, and compounds based on their underlying sequence/structure. You will work closely with interdisciplinary teams to identify computational needs and design solutions. Requires a BS/MS/PhD or equivalent experience in Computer Science, Bioinformatics, Cheminformatics, Biology, or Chemistry. Programming experience with SQL, HTML/XML, C, C++, Java, Perl, and/or Python in a production environment. Knowledge of Unix, object-oriented design, algorithms, and data structures. Knowledge of commercial drug discovery software and/or pattern recognition/statistical data analysis will be helpful. Experience with implementation of production-use software or databases preferred, as is experience maintaining DNA and protein sequence or compound structure databases. Excellent communication skills and experience working in a team-oriented environment. Job #: 01-INFO

Exelixis offers highly competitive salaries and benefits, generous equity participation, and a stimulating, highly interactive research setting that recognizes and rewards achievement. Please send your resume/CV to Exelixis, Inc., HR Department via fax to (650) 837-7226; or email [careers@exelixis.com](mailto:careers@exelixis.com). EOE.

Please visit our website at  
**[www.exelixis.com](http://www.exelixis.com)**  
to view additional exciting career  
opportunities and job descriptions.



# Propelling Data

to the

# Edge of Discovery

Pfizer's Discovery Technology Center (DTC) in Cambridge, Massachusetts, has accepted the challenge of developing and implementing new, more efficient paradigms for discovering drug candidates. To meet our goals, we've formed a small, agile team with a crisp vision and a drive to succeed.

The Molecular Informatics group at the DTC provides a unique, multidisciplinary environment where bioinformaticians, cheminformaticists, software engineers and statisticians work together on challenging discovery projects. Our focus is on integrating computational molecular biology and computational chemistry to discover the structural determinants of compound binding within a family of target proteins and the chemical features of compounds that confer specificity and potency.

If you're a skilled scientist with a passion for developing computational solutions and have excellent leadership and communication skills, consider these opportunities in our Molecular Informatics group.



Life is our life's work.

## Director, Molecular Informatics

Your confidence and bold approach make you an ideal candidate to accept the challenge of leading our Molecular Informatics group toward revolutionizing the drug discovery process. Beyond a PhD and postdoctoral research experience in Chemistry, Computational Chemistry, Bioinformatics, Genomics, Structural Biology, Mathematics or Computer Science, you'll need clear scientific vision for unifying bioinformatics and cheminformatics in drug discovery. The ability to lead worldwide Molecular Informatics initiatives and develop strong working connections with Pfizer teams worldwide is also critical, as are leadership and management experience and outstanding organizational and communication skills. Req. #21May0105051

## Cheminformatics Scientist

Applying your expertise in computational chemistry, algorithm development, computer programming (Perl, C++, or Java) and statistics, you'll develop cheminformatic algorithms to discover and optimize potential lead compounds for families of drug targets. You'll need a PhD in Chemistry, Biochemistry, or a related discipline and 3 years of experience. Familiarity with pharmacophore analysis, QSAR, and bioinformatics is desired. Req. #21May0105049

## Computational Chemist

Advance our efforts to develop pharmacophore and protein binding site models to discover and optimize potential lead compounds for families of drug targets. We require a PhD in Chemistry, Biochemistry, or a related discipline, 3 years of experience, and proficiency in computational chemistry, CoMFA and pharmacophore analysis, QSAR, docking, structure-based drug design and structural bioinformatics. Programming skills (Perl, C++, or Java) and a background in statistics are desired. Req. #21May0105050

## Computational Biologist

Discover connections between protein sequence, 3-D structure, and function for families of therapeutic targets. You'll need a PhD and 3+ years experience in Bioinformatics and Computational Biology, with fluency in C, Java or Perl in a Unix environment. Experience with protein structural modeling, machine learning, hidden Markov models, and computational chemistry is desired. Req. #21May0105052

## Senior Statistician

We have an opportunity for a senior statistician who will be responsible for innovative discovery data mining. Req. #21May0105054

For details on other opportunities for researchers and bioinformatics and IT specialists, visit our website at

<http://www.pfizerdtt.com/>

At our campus, you'll enjoy the entrepreneurial spirit of a small company, as well as the resources of one of the world's largest and most respected pharmaceutical enterprises. You'll also have the opportunity to be a part of the Boston-Cambridge academic and scientific community, while savoring a quality of life unique to Boston and New England. For consideration, please email your resume, indicating Req. #, to [SCI@pfizerresume.com](mailto:SCI@pfizerresume.com). If necessary, you can mail your resume, indicating Req. #, to Pfizer Resume Processing Center, 630 Boston Road M-104, Billerica, MA 01821, Attn: Softshoe Resumes. An equal opportunity employer, Pfizer offers a workplace rich with diversity and potential.

# INFORMATICS DATA HANDLERS IN DEMAND



LEI DU

**BASEL, Switzerland:** "Making sense of data is critical for what we do in the pharmaceutical business," says Lei Du, director of informatics at the Roche Center for Medical Genomics (RCMG). "Modern science and medicine have become increasingly information-rich and information-driven. You have to know how to manage information."

That knowledge has become more valuable in the past year as drug companies have started to interpret the results of sequencing the genomes of humans and other organisms. "For the human genome alone you're talking about tens of thousands of genes encoding hundreds of thousands of gene products," Du adds. "Understanding the function of these genes requires functional genomics tools that generate millions of data points. Nowadays we can screen hundreds of thousands of molecules per day against any given target. The data have to be managed and analyzed. We have to know how to do it reliably and intelligently."

That's where the RCMG comes in. "Roche has a large informatics group worldwide," Du says. "My organization is part of the company's overall genetics and genomics effort." The Center will concentrate on the use of genomics to maximize the understanding of disease mechanisms, thus leading to better diagnostics and therapeutics. "Our main focus is bioinformatics," Du explains. "We're just building the group up. We are looking for talented people."

Two factors complicate the search for employees. First, the demand

for bioinformaticists far exceeds the supply. Second, the nature of bioinformatics is changing. That makes it difficult for employers to identify the types of scientist they need to hire. "Because the field is still relatively new, the multidisciplinary and cutting edge nature of bioinformatics makes it difficult to have a huge abundance of people with just the right combination of skills," Du says. "We used to look for generalists who could develop methods and tools very quickly. As some of the basic scientific computing infrastructure has been built and made widely available, we're now looking for more specialists who have in-depth knowledge in a particular field."

Thus Du looks for both scientists trained in chemistry, genetics, and related fields who have shown capability in information technology and individuals with a great deal of computer experience who have been exposed to research in life science. "We hire a mixture of new graduates from college and people with experience in bioinformatics," he says. "We get people with good training from universities. But without experience they must come in at entry levels and learn on the job. Those with experience can come in and start contributing."

Du has simple advice for scientists interested in developing careers in informatics. "Students should have very solid training in multidisciplinary areas — biology, information technology, and engineering in particular," he says. "They must have a very keen interest in science and informatics and really love what they are doing. And they must enjoy working in a research environment."



MARY MCWEENEY

**CAMBRIDGE, Massachusetts:** VARIAGENICS develops and commercializes technologies related to pharmacogenomics, the study of genetic influences on patients' responses to drugs. Founded in 1992, the company initially focused on cancer therapy. For the past five years, however, it has broadened its

coverage to include pharmacogenomic technologies relevant to cardiovascular disease, disorders of the central nervous system, and inflammatory conditions, as well as cancer. The company has identified and analyzed genetic markers implicated in pathways that are the targets of several drugs now in development.

"Informatics is critical to what we do," says Mary McWeeney, the company's director of human resources. "The bioinformatics team represents about 20 percent of our R&D group. By the end of the year we hope that number will rise to 25 percent."

McWeeney seeks individuals with specific skills. "Right now we're looking for software engineers and database curators," McWeeney says. "For software engineering we want people with a B.S. or M.S. degree in computer science and experience with Java, C++, the UNIX environment, SQL, and Oracle. Having a background in life science is helpful but we don't require it for this type of position. Database curators need a B.S. or M.S. degree in life science or computer science and at least a working knowledge of biology and the literature." Working experience in bioinformatics is desirable but not mandatory. "We will hire scientists

directly from college if they have the qualifications and the eagerness to learn," McWeeney says.

VARIAGENICS is a small company, but McWeeney asserts that it has an appealing corporate culture. "It's a very entrepreneurial environment," she says. "Everybody is hard-working, dedicated, and focused on making our brand of pharmacogenomics a success. While we are team-oriented, individually we come from a variety of backgrounds and have proven track records in our fields. It helps that we have a strong management team that sets the tone and the vision for the company. Also, we offer competitive compensation and benefits."

How can students majoring in life science or computer science prepare for a career in bioinformatics within the pharmaceutical world? "One should strongly consider formal training and experience in software engineering and related disciplines. Also network with people currently in these jobs to gain perspective on the daily activities of bioinformatics programming," McWeeney advises. "And if you're interested in VARIAGENICS, realize that we look for people who are very capable and extremely enthusiastic and who love working in an entrepreneurial environment." ■

FOR FURTHER  
VALUABLE  
CAREER FEATURES,  
GO TO  
**sciencecareers.org**,  
THEN CLICK ON  
**Advice and  
Perspectives.**



ACCTACC

# Cracking The Code

And Redefining  
Human Lives.  
Every Day.

*At Celera, our discoveries are changing the course of history and revolutionizing science. We are defining a new model for drug discovery and development that builds upon our demonstrated abilities in high-throughput data generation and bioinformatic technology. Celera is rapidly expanding the Proteomics groups in Rockville, MD and seeks talented individuals with industry experience in drug discovery and development who want to be part of this exciting new paradigm. Some of the world's most extraordinary minds have joined us. Now it's your turn!*



**CELERA**

An Applera Corporation Business

Openings are currently available in the following areas:

- Cell biology
- Confocal microscopy
- Recombinant protein expression
- Protein purification/separation (LC, HPLC, MDLC)
- Protein chemistry (derivatization/conjugation)
- Protein interaction analysis (SPR, calorimetry)
- Biological mass spectrometry (ESI, MALDI, TOF-TOF)
- Immunological assay development
- Pathology
- Histology/Immunohisto chemistry
- Antibody production
- Software engineering

While changing the way drug discovery and development is conducted is impressive, we also believe in rewarding you in other ways:

- A very competitive salary structure
- Generous matching 401(k)
- Stock options/stock purchase
- Life, health, dental and vision, and disability insurance
- 3 weeks personal time off
- 11 paid holidays
- Compaq computer discount purchase program
- Education assistance
- On-site fitness center

For more information about these and other exciting career opportunities, visit our web site at: <http://www.celerajobs.com>

Fax: (240) 453-3311

EOE, M/F/D/V

Celera is committed to a drug-free environment with pre-employment drug testing.



**Come to  
think of it...**

*When you think about all the superior pharmaceutical, nutritional, and diagnostic products Abbott Laboratories manufactures, it makes sense that we have the superior technological environment to match. Exciting challenges, growth opportunities, and the latest technology - everything that makes IT worthwhile. Come to think of it. It's all here at Abbott. We're looking for professionals to fill the following positions:*

### **Bioinformatics Group Leader**

We are seeking a highly motivated individual to provide leadership and direction to a core bioinformatics group within our Global Pharmaceutical Research organization. This position will be responsible for innovation, development, improvement, distribution, maintenance and training for our enterprise bioinformatics systems that are designed to assist the therapeutic area scientists in identifying and validating drug targets. Additional responsibilities will include developing and coordinating bioinformatic training programs and broadening the use and utility and impact of these technologies within the Abbott scientific organization.

Requirements include a Ph.D. and practical experience in one or more of the following areas: bioinformatics, molecular biology, biochemistry, computer sciences and related specialties. The ideal candidate will have five or more years of practical application and experience in the field of bioinformatics, with a demonstrated impact and significant management experience.

### **Bioinformatics Scientists - Software and Interface Development**

We are seeking individuals to join our core Global Pharmaceutical Research bioinformatics team. You will be designing, implementing, improving, and maintaining bioinformatic programs, sequence databases and user interfaces. The bioinformatic team works closely with therapeutic area scientists to provide data analysis solutions in the area of sequence analysis and data mining by assimilating public domain and proprietary data related to gene/protein families, cell signaling pathways and gene-disease correlations.

Position requirements include an M.S. or Ph.D. in bioinformatics, computer science or a related field, with practical experience in bioinformatics software and interface development. Molecular biology experience is a plus. Experience in programming languages including C, C++, Java and PERL are important. Oracle/SQL experience is also a strong plus.

### **Bioinformatic Scientists - Expression Analysis**

We are seeking highly motivated bioinformatics scientists to work with project biologists in our Global Pharmaceutical Research organization. These individuals will assist in the development and application of microarray and other expression profiling technologies, to study human diseases and elucidate gene function. These individuals will apply their unique skills in molecular biology, genomics and computational analysis to aid in the design, interpretation and analysis of RNA expression experiments to profile compounds, identify pathways and discover targets useful for drug development.

Requirements are an M.S. or Ph.D. in molecular biology, biochemistry, bioinformatics, or a related life science field. Appropriate candidates should have postgraduate experience in applying microarray technology to the discovery, validation and profiling of drug targets. Excellent communication skills and a strong background in statistical methods are essential.

Follow your aspirations to Abbott for diverse opportunities, competitive salaries, great benefits, a 401k retirement savings plan, a company paid pension plan and profit sharing, as well as growth and stability to build your future. For immediate consideration, please email your resume to [jami.stacey@abbott.com](mailto:jami.stacey@abbott.com) and [succcess@abbottcareers.com](mailto:succcess@abbottcareers.com) or forward it to: Abbott Laboratories, P.O. Box 549251, Suite 204, Waltham, MA 02454-9251. Please include the Ad Code: 1900HS/AD/SCI in your email subject line and on all written correspondence. For more information, visit our website at [www.abbott.com](http://www.abbott.com).



**ABBOTT  
LABORATORIES**  
Quality Health Care Worldwide

[www.abbott.com](http://www.abbott.com)

An EOE, we are committed to employee diversity.



## **Opportunities**

### **Pediatric Informatics**



Outstanding applicants are invited to apply for a tenure or non-tenure faculty position in Children's Medical Center of Cincinnati, University of Cincinnati's growing program in Pediatric Informatics.

### **Research Faculty, Bioinformatics (2 Positions)**

We are seeking doctoral trained candidates whose research interests complement existing faculty strengths in computational sciences, proteomics and microarray technology. Scientists trained in applied or theoretical math and computer science with substantial interest in biological science are encouraged to apply. Candidate will be expected to take an active role in the development of Children's Hospital Medical Center's and University of Cincinnati's bioinformatics academic programs. The successful candidate will gain substantial resources for conducting their own research and the opportunity to collaborate with other outstanding genetic and clinical researchers. Experience and qualifications of candidate will determine academic rank.

### **Research Faculty, Database Systems**

Outstanding candidates with qualifications in database systems, preferably with interests in heterogeneous databases, information systems, datamining, and advanced statistical/mathematical algorithms are encouraged to apply. Candidate will possess a Ph.D. in computer science, or related field. Experience and qualifications of candidate will determine academic rank.

Send CV and references to:

**John P. Pestian, Ph.D.**

**Associate Professor**

**Director, Pediatric Informatics**

Children's Hospital Medical Center and  
Research Foundation

TCHRF-C 8508

3333 Burnet Avenue

Cincinnati, OH 45229-3039

(513) 636-2051 (513) 636-2056 FAX

[jpestian@chmcc.org](mailto:jpestian@chmcc.org)

Visit our website at

[www.cincinnatichildrens.org](http://www.cincinnatichildrens.org)

Children's Hospital Medical Center is an  
Affirmative Action/Equal Opportunity Institution.  
Women and minorities are encouraged to apply.

*The Future  
is our  
Mission*

Forschungszentrum Jülich



*The Research Centre Jülich is the largest interdisciplinary centre of its kind in Germany: 4200 staff members are concerned with finding solutions for urgent problems in the fields of "Matter", "Energy", "Information", "Life" and the "Environment".*

*As a member of the Hermann von Helmholtz Association of German Research Centres (HGF), the Research Centre Jülich is primarily committed to issues of public concern.*

At Research Centre Jülich and Heinrich Heine University Düsseldorf a position as a

## **University Professor (C4) for Theoretical Biophysics**

is to be filled as soon as possible. For the period up to July 2006, the successful candidate will be appointed to a chair at the University of Düsseldorf and seconded to Research Centre Jülich according to the so-called Jülich Model. The appointee will head a scientific Working Group for Theoretical Biophysics at the John von Neumann Institute for Computing at Research Centre Jülich. From July 2006 the holder of the position will be fully integrated into the Faculty of Mathematics and Science of the University of Düsseldorf and will take over the Chair of Physical Biology. Close ties to Research Centre Jülich will continue to be maintained.

The successful candidate is expected to participate in biophysics teaching at Heinrich Heine University, Düsseldorf, and to establish an internationally competitive research group. He or she should be active in the field of **Theoretical Biophysics** in close cooperation with experimental working groups. Possible and desirable fields of work are:

- theory and simulation of biomolecular functions,
- structural dynamics and statistical mechanics of biological macromolecules,
- further development of simulation procedures.

The salary will conform to the C4 scale (full professor) of the German civil service. Candidates are required to have *Habilitation* or equivalent academic qualifications as well as the ability to head an institute and undertake academic teaching duties.

Equal opportunities is a cornerstone of our staff policy for which we have received the "TOTAL E-QUALITY" accolade.

Applications including a curriculum vitae, list of publications, a short summary of scientific achievements, a brief description of future fields of work and up to five of the candidate's most significant publications should be submitted by 29 June 2001 to

**Vorstand der Forschungszentrum Jülich GmbH  
D - 52425 Jülich**

Internet adress: <http://www.fz-juelich.de>

Further information can be obtained from Research Centre Jülich (tel. ++49 2461 613001) and the Dean of the Faculty of Mathematics and Science, Heinrich Heine University, Düsseldorf (+49 211 8112193).

# the abdu salam international centre for theoretical physics

## DIRECTOR

The current Director of the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy, Professor Miguel A. Virasoro, is expected to retire on 31 May 2002. A Search Committee has been established to identify a suitable successor, and it would welcome nominations of qualified candidates for the post.

The ICTP is an organization with the triple purpose of promoting research in physics and mathematics in developing countries, serving as a forum for scientific discourse to scientists from all over the world, and conducting first-class in-house research. It has a permanent staff of 131 scientists, technicians and administrative employees, a yearly budget of around US\$ 18 million, maintains active links with about 170 countries, and hosts up to 4000 visiting scientists each year on short- and long-term stays.

It is expected that the next Director will maintain the standard of world leadership in theoretical physics introduced by the late Abdus Salam, while at the same time vigorously sustaining the trend of innovation in cutting-edge research developed in recent years. International recognition in theoretical physics or mathematics is the first and most important requirement. But a broad view on developments in science, a proven capacity to manage, motivate and inspire a team of scientists, and experience with programmes of scientific cooperation with developing countries, are also important qualities expected of the successful candidate.

Moreover, since ICTP operates under a tripartite agreement between UNESCO, the International Atomic Energy Agency and Italy, with the Italian State graciously providing 85% of the budget, an ability to deal with government agencies and international organizations will be of the utmost importance.

**Nominations will be accepted by the Chairman of the ICTP Search Committee, c/o Executive Office, Natural Sciences Sector, UNESCO, 7, Place de Fontenoy, F 75352 Paris 07 SP, France, with copy to Director's Office, The Abdus Salam ICTP, Strada Costiera 11, 34014 Trieste, Italy.**



## The Jackson Laboratory

### STAFF SCIENTISTS

The Jackson Laboratory, an independent, not-for-profit mammalian genetics research institution, is currently recruiting faculty members in Bioinformatics/Computational Biology. The Laboratory is also a major resource for the research community and a center for training in mammalian genetics. Designated a Basic Cancer Center by the National Cancer Institute, the Laboratory offers its 32 principal investigators the opportunity to conduct basic research in an interactive environment. The successful applicant should have a Ph.D., M.D. or a D.V.M., postdoctoral training, and a record of research excellence and be able to develop a competitive independent research program.

#### The Laboratory Offers:

- **Excellent Collaborative Opportunities** - An interactive staff with ongoing research in Cancer, Developmental Biology and Aging, Genomics, Hematology and Immunology, Metabolic Diseases, Neurobiology and Sensory Deficits, and Bioinformatics/Computational Biology.
- **Unparalleled Mouse and Genetic Resources** - Over 2,000 genetically defined JAX mouse strains are available, DNA Mapping Panel Resource, Cytogenetic Models Resource, Genetic Information Resource, Mouse DNA Resource, Mouse Genome Database, and Gene Expression Information Resource.
- **Outstanding Shared Scientific Services** - Equipped with state-of-the-art technology, staffed by personnel trained in Biological Imaging, Cell Biology, Flow Cytometry, Microchemistry, (including DNA sequencing, allele typing, expression profiling and protein services), Transgenic and Targeted Mutant Preparation, Research Computing and Multimedia Services.
- **Training Programs** - Our Postdoctoral Program Office assists in recruiting and interviewing postdoctoral fellows. There are currently over 40 postdocs at the Laboratory supported by NIH training grants, institutional training funds, individual fellowships and their mentors' grants. A predoctoral training program with the University of Maine is in place.
- **Major Meeting Center** - The Jackson Laboratory hosts a series of conferences featuring the mouse as a model for human disease and several courses, most notably, the annual Short Course in Medical and Experimental Mammalian Genetics.
- **Grants Management Support** - Our research is supported largely by Federal grants and/or private funding to individual principal investigators. A highly qualified staff is available to aid in grant preparation and submission.

**Applicants for staff positions should send a curriculum vitae, statement of research interests, and names of three to six references to:** The Director's Office, The Jackson Laboratory, 600 Main Street, Bar Harbor, Maine 04609. **FAX:** (207) 288-6044. **Email:** [rsp@jax.org](mailto:rsp@jax.org).

EOE/AA Employer

<http://www.jax.org>

## COMPUTATIONAL STRUCTURAL AND FUNCTIONAL GENOMICS

### University of California, Berkeley

**POSTDOCTORAL POSITIONS** available immediately in computational structural and functional genomics at UC Berkeley. Research areas include prediction of gene function using genomics and phylogeny, structural genomics and structure analysis; homology detection from sequence and structure; or any related area of computational molecular biology. Applicants should have PhD and programming experience.

For these Postdoctoral positions only, please send summary of scientific interests, CV, reprints, and reference letters to: **Dr. Steven E. Brenner, 111P Koshland Hall, University of California, Berkeley, CA 94720-3102** or email to [jobs@compbio.berkeley.edu](mailto:jobs@compbio.berkeley.edu). For additional information, see us on the Web at <http://compbio.berkeley.edu/jobs/>.

### Lawrence Berkeley National Laboratory

The Berkeley Structural Genomics Center aims to provide 3D structures or models for all proteins in *M. pneumonia*. **COMPUTATIONAL BIOLOGIST** positions (PB/013178/JS & PB/013120/JS) are available to perform computational structural genomics research. For additional LBNL job and application details, see <http://www.strgen.org/jobs/>.

The University of California and Berkeley Lab are Equal Opportunity/Affirmative Action Employers.

Affymetrix' GeneChip® technology, the preeminent tool for acquiring, analyzing and managing complex genetic information, bridges the gap between computers and biology. Through this technology, we're helping researchers turn genetic information into knowledge that will dramatically accelerate pharmaceutical research and improve the diagnosis, treatment and prevention of disease. And Affymetrix is leading the way, with more powerful versions of this technology on the horizon. Join us as we advance into the Genetics Age.

### Genomic Collaborations Scientist Santa Clara, CA

In this role, you will initiate/manage collaborations with Affymetrix' customers; prepare application notes, presentations, and other materials; present high-level seminars on microarray technologies within the drug and Ag development environment; participate in joint sales calls; technically manage large accounts; and disseminate information and feedback regarding customer requirements and needs for new or improved products. Requires a PhD in Molecular Biology, Bioinformatics, or related and 2-5+ years R&D, product development, software development, or commercial collaboration experience, and 2-4+ years experience with microarray and/or other expression technologies. Highly developed presentation skills, successful track record in publications and/or novel patents in genomics and microarrays, and commercial experience in business development, marketing, or as a liaison between scientific staff and sales are vital. Effective communication skills are critical, as you will need to manage challenging Q&A discussions regarding Affymetrix technology and products. Travel 30-40% will be required. Job Code SCI-AGDF460

To be considered for our Santa Clara opportunity, please mail, fax, or email your resume, indicating Job Code, to: Affymetrix, Human Resources, 3380 Central Expressway, Santa Clara, CA 95051. Fax: (408) 481-0422. Email: HR-proddeveng@affymetrix.com.

### Data Analysis Scientist Emeryville, CA

Utilizing advanced data analysis and visualization tools to understand microarray data, you will apply novel data analysis techniques to medium and large data sets generated from collaborations between Affymetrix and external scientists. You'll also provide high level data analysis and bioinformatics support; assist in defining/creating data analysis, visualization and mining tools; generate training and presentation materials; and make presentations. Requires an MS or PhD in Computational Biology, Bioinformatics, or related and at least 2 years experience analyzing microarray data. Excellent communication and project management skills are essential. Knowledge of other genomics technologies is highly desirable. Job Code SCI-PTA-N10

To be considered for our Emeryville opportunity, please mail, fax, or email your resume, indicating Job Code, to: Affymetrix, Human Resources, 6550 Valjejo Street, Emeryville, CA 94068. Fax: (510) 428-8585. Email: HR-Emeryville@affymetrix.com.

Take part in this striking intersection of computers and biology. As part of our team, you will enjoy a competitive salary and benefits package, plus a dynamic work environment where you'll have the resources you need to get the job done. We are an equal opportunity employer.

Visit our website at  
[www.affymetrix.com](http://www.affymetrix.com).



# Growing Amazement



Cereon Genomics' mission is to apply genomics technology to transform agriculture ... making plants hardier, naturally disease and pest-resistant, able to grow in some of the most inhospitable conditions. All to improve the quality and quantity of the world's food supply.

In the past three years, we have taken major steps in achieving our mission by:

- Completing a draft sequence of the *Arabidopsis thaliana* genome
- Building a robust pipeline of gene lead candidates
- Implementing the latest state-of-the-art technology in bioinformatics, expression profiling, lab automation and plant research
- Bringing together a team of exceptional professionals at all levels

It is with growing amazement that we realize what we have accomplished... and what is still left to do. That's why we seek more innovators with a focused sense of urgency and a healthy sense of wonder to join us, keep our impressive momentum going, and make the future of genomics technology happen!

### RESEARCH ASSOCIATE

Work in a team setting on functional identification of regulatory genes in model systems. B.S. or M.Sc. with experience in molecular biology (DNA/RNA isolation, gene cloning, PCR) required. Strong interest or expertise in plant protoplast culture and transformation is desirable. Job Code: 76-05SI

### ASSOCIATE SCIENTIST/ SR. RESEARCH ASSOCIATE

Requires experience in building plant gene identification and function for agriculturally relevant traits. M.Sc. or Ph.D. and understanding of plant physiology, metabolic biochemistry, plant genetics or related fields, excellent communication, interpersonal, and teamwork skills also required. Job Code: 76-06SI

### INFORMATICS ANALYST

Requires M.Sc. or Ph.D. in Biology or related field, a proven ability in analyzing large volumes of biological data using computational approaches, programming (Perl, C/C++, Java) and database experience (relational, SQL queries), statistics background and experience with SAS or Splus. A desire to explore biology using a multifaceted bioinformatic approach, good organization, teamwork, communication skills, creativity, and initiative also required.

Job Code: 72-01SI

### STATISTICIANS

Support large-scale genetic approaches to studying gene function, including transcriptional and metabolic profiling. Consult on experimental design and analysis, and develop approaches for exploring large data sets. Requires Master's or Ph.D. in Statistics or Biostatistics, Splus programming for data management, experience in statistical analysis, experimental design, and multivariate analysis. Some background in biology essential. Must be organized, detail-oriented, have excellent communication and teamwork skills.

Job Code 88-01SI

### DATA ANALYST

Analyze and sequence data for polymorphism discovery, validation, and genotyping assay development. Requires experience in PCR, molecular biology, and computing skills, such as UNIX, phred, phrap, pangea, and PERL. Background in plant genetics helpful.

Job code: 85-03SI

Please send your resume, indicating Job Code, to:  
Attn: Recruiter, Cereon Genomics, LLC  
45 Sidney Street, Cambridge, MA 02139  
Phone: (617) 551-8297; Fax: (617) 551-1990

Cereon Genomics is an equal employment opportunity/affirmative action employer, M/F/D/V, proudly reflecting the natural diversity of the world around us.

TO LEARN MORE ABOUT US, VISIT OUR  
WEB SITE AT: [WWW.CEREON.COM](http://WWW.CEREON.COM)



Transforming Agriculture  
To Meet The World's Food Needs



## Infinite Discoveries Unparalleled Opportunities

The DuPont Pharmaceuticals Company blends diverse talents to create an environment focused on applying world class science to the discovery and development of novel solutions, for major unmet medical needs. Our modern research facilities provide an attractive, collegial work environment. Most importantly, our enthusiastic research teams are engaged in lifelong learning that will keep us at the cutting edge of drug discovery. We devote an extraordinary amount of resources to research and development because we know that our discoveries will improve the quality of life for millions of people around the world.

### Staff/Sr. Staff Scientist - Chemical Enzymology

We are seeking a highly motivated individual interested in working with both enzymes and small organic molecules in research leading to the discovery of novel therapeutic agents. The successful candidate must be able to work with and communicate with synthetic chemists, biochemists, physiologists and molecular geneticists in this multi-disciplinary approach. Research involves the purification, assay and characterization of target enzymes, as well as investigations of the mechanisms of enzyme action and inhibition. Strong analytical skills are essential. Experience with enzyme kinetic analysis and familiarity with laboratory equipment such as spectrophotometers, spectrofluorometers, HPLC, scintillation counters and microtiter plate readers is highly desirable. BS/MS degree in biochemistry or related science, or equivalent plus additional relevant experience required.

Our commitment to our employees includes an excellent salary and a comprehensive benefits package. To apply, please forward your cover letter and resume to: DuPont Pharmaceutical Company, CODE: JM:AR/VRF11302, Human Resources Department, Box 80400, Wilmington, DE 19880-0400; E-mail: [vrresum@dupontpharma.com](mailto:vrresum@dupontpharma.com). EOE



DuPont Pharmaceuticals Company



### MAYO CLINIC POSTDOCTORAL POSITIONS

NIH-funded postdoctoral positions are available immediately to work in the area of DNA damage-signaling pathways and cancer biology. The lab currently focuses on the biochemical and molecular aspects of breast/ovarian cancer and the roles of tumor suppressor genes p53, Chk2, BRCA1/BRCA2 and the DNA damage-signaling pathway in tumorigenesis. The approaches we are using range from mammalian cell culture, molecular biology to mouse and yeast genetics. A strong background in molecular and cellular biology is essential. We are seeking candidates who are self-motivated and career-oriented. The research environment at Mayo Clinic is excellent. Prospective applicants are encouraged to contact me by e-mail at [Chen.junjie@mayo.edu](mailto:Chen.junjie@mayo.edu) or letter to:

Junjie Chen, Ph.D.  
Department of Oncology  
Guggenheim Building, Room 1342  
Mayo Clinic  
200 First Street, SW  
Rochester, MN 55905

See also: <http://www.mayo.edu/research/>

Mayo Foundation is an affirmative action and equal opportunity employer and educator.

## nature neuroscience

seeks an **ASSISTANT EDITOR**

*Nature Neuroscience*, a leading monthly journal from the publishers of *Nature*, has a position available for an Assistant Editor. The journal publishes high-quality papers in all areas of neuroscience, including molecular, cellular, systems, cognitive and computational studies, and provides a highly visible forum for communicating important advances to a broad readership. Further information may be found on our web site (<http://neurosci.nature.com>).

Applicants should have a strong research background in neuroscience, a broad interest in the subject, excellent literary skills, commitment to the communication of scientific ideas, and willingness and ability to learn new fields. The successful candidate will participate in all aspects of the editorial process, including manuscript selection, commissioning and editing News and Views and Reviews, and writing for the journal. The job also involves attending meetings in the US and abroad, and maintaining contact with the international scientific community. The new editor will join our team in the Manhattan office of the larger publishing group that also produces *Nature Genetics*, *Nature Medicine*, *Nature Biotechnology*, *Nature Structural Biology* and *Nature Immunology*.

Please submit a curriculum vitae, a short (500-1000 words) News and Views-style article on an exciting and newsworthy recent development in any area of neuroscience, and a cover letter explaining your interest in the position to The Editor, *Nature Neuroscience*, 345 Park Avenue South, New York, NY 10010 (fax: 212-696-0978; e-mail: [neurosci@natureny.com](mailto:neurosci@natureny.com)). Applications should arrive as soon as possible, and **no later than 24 June 2001**.

### Chairperson Department of Neuro-Oncology

Division of Cancer Medicine

The University of Texas M. D. Anderson Cancer Center is actively recruiting a Chairperson for the Department of Neuro-Oncology. The successful candidate must be a recognized leader with a distinguished record in Neuro-Oncology. This opportunity provides an unmatched setting for an outstanding clinician who will provide strong administrative leadership and will coordinate clinical care, education and research. The Chairperson, in consultation with the Head of the Division of Cancer Medicine, will be responsible for departmental budgets, research planning, resource allocations, space administration and faculty development.

M. D. Anderson, ranked the #1 cancer center and nominated in four other categories by *U.S. News & World Report*, is the world's largest treatment facility for oncological diseases. Located within the Texas Medical Center campus in Houston, our location provides access to a world-renowned medical community and the splendid cultural and recreational diversity of a sophisticated, metropolitan area that is the country's fourth largest city.

The Neuro-Oncology Department has Clinical and Experimental Neuro-Oncology Sections, a Psychiatry Section, Neuropsychology Services and a Neurophysiology Laboratory, with an active teaching and research program in a physician-patient communication arena.

Interested applicants, board certified and eligible for licensure by the Texas Board of Medical Examiners, should forward a copy of their C.V. and a letter of interest describing their clinical and academic interests to: **Gabriel M. Hortobagyi, M.D., Search Committee Chair, UT M. D. Anderson Cancer Center, 1515 Holcombe Blvd., Box 424, Houston, TX 77030-4009. Fax: (713) 794-4385. E-mail: [ghortoba@mdanderson.org](mailto:ghortoba@mdanderson.org)**

THE UNIVERSITY OF TEXAS  
MD ANDERSON  
CANCER CENTER  
*Making Cancer History*

The University of Texas M. D. Anderson Cancer Center values diversity in its broadest sense. Diversity works at M. D. Anderson. EEO/AA Smoke-free environment.

**ASSISTANT PROFESSOR  
DEPARTMENT OF BIOCHEMISTRY  
MCMASTER UNIVERSITY**

McMaster University, a research-intensive institution and leading centre for biological and biomedical research invites applications for a contractually limited three year appointment at the Assistant Professor level in the Department of Biochemistry, effective September 1, 2001.

Candidates must hold a Ph.D. in Biochemistry or a closely related field. We are seeking applications from individuals with a broad expertise in Biochemistry. This is primarily a teaching position and the successful applicant will be expected to teach undergraduate courses in Biochemistry as well as to run existing laboratory courses and develop new modules for laboratory courses.

Applicants should provide a curriculum vitae, a statement of their teaching interests and experience and should arrange for three letters of recommendation to be sent to: **Dr. David W. Andrews, Acting Chair, Department of Biochemistry, 1200 Main Street West, Room 4N59, Hamilton, Ontario L8N 3Z5, Canada.** The closing date for applications is June 30, 2001. Email and fax applications will not be accepted.

*In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. McMaster University is committed to employment equity and encourages applications from all qualified candidates, including members of visible minorities, aboriginal peoples, and persons with disabilities and women.*

**MUSC**  
MEDICAL UNIVERSITY  
OF SOUTH CAROLINA

**CHAIR  
DEPARTMENT  
OF  
MEDICINE**

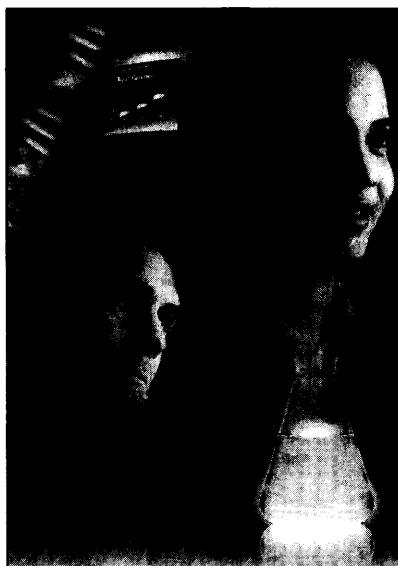
The Medical University of South Carolina College of Medicine invites applications and nominations for the position of PROFESSOR AND CHAIR of the Department of Medicine. Applicants must be Board certified in Internal Medicine, have demonstrated administrative experience and strong leadership skills, have an outstanding record of accomplishment in research, desire for academic excellence, and have interest in all aspects of teaching and patient care. Clinical facilities include a 596-bed university hospital, and a 115-bed Veteran's Administration Hospital.

The Department consists of 160 full time faculty and 12 divisions. The graduate medical education program includes 28 interns, 43 residents, and 54 fellows. The overall departmental budget exceeds \$40 million annually.

Applications and nominations may be sent to: **Paul R. Lambert, M.D., Chair, Medicine Chair Search Committee, Professor and Chairman Department of Otolaryngology, c/o B. Carson, Office of the Dean, Medical University of South Carolina, 96 Jonathan Lucas Street, P. O. Box 250617, Charleston, SC 29425.**

Applicants submitting a letter of interest should include a curriculum vitae and names and addresses of three references. The deadline is August 1, 2001.

*MUSC is an equal opportunity employer.  
promoting workplace diversity.*



challenge innovation teamwork

## The Face of Pfizer

careers that matter

**T**he best is getting even better! As the world's largest pharmaceutical research enterprise, Pfizer is dedicated to providing the best innovations in medicine while pursuing tomorrow's discoveries in research and development. If you share our dedication to

discovering, developing and delivering medicines to improve the health of both people and animals worldwide, we want yours to be the newest Face of Pfizer. Consider the following opportunities at Pfizer Global Research and Development facilities in Groton, Connecticut.

### Research Scientist, Biology

In support of the discovery of new drugs used to treat mental illness, you will lead a behavioral pharmacology laboratory in the experimental preclinical evaluation of psychotherapeutic agents. Responsibilities include generating new drug discovery ideas; designing and conducting studies to evaluate novel psychiatric medicines; developing *in vivo* biological screens and disease models; and participating in or leading multidisciplinary teams. Additionally, you will coordinate studies conducted by outside providers or in collaboration with academic institutions and lead a team of associate technical staff while providing guidance and assigning individual tasks. This position requires a PhD, 5-10 years postgraduate experience (including at least 3 years postdoctoral experience), and expertise in *in vivo* behavioral models predictive of clinical psychotherapeutic drug response. Substantial training and experience in behavioral neuroscience or behavioral pharmacology are also required. Req. #02May0104730

### Sr. Research Scientist, Bioinformatics/Molecular Toxicology

Working with a multidisciplinary team of scientists within the Drug Safety Evaluation Department, you will apply data visualization and mining techniques to the analysis of large and complex data sets, including those generated from gene expression, proteomics, NMR and imaging techniques. Additionally, you will integrate this data with conventional toxicology data and develop new databases of molecular toxicology information. You must have a PhD or equivalent in Life Sciences with an emphasis on bioinformatics or computational biology approaches. Experience with relational databases and query, data mining and visualization tools is essential; familiarity with statistics and programming languages is highly desirable. Req. #22Mar0103742

Pfizer offers an exceptional work environment complete with training opportunities designed to develop your professional talents. We encourage all applicants to apply by emailing your resume, indicating the appropriate Req. # in the subject field, to [SCI@pfizerresumes.com](mailto:SCI@pfizerresumes.com). If necessary, you may also mail your resume, indicating Req. #, to Pfizer Resume Processing Center, 630 Boston Road M-104, Billerica, MA 01821, Attn: Softshoe Resumes. An equal opportunity employer, Pfizer offers a workplace rich with diversity and potential.



Life is our life's work.

## BIOINFORMATICS CENTER DIRECTOR

The University at Buffalo, Roswell Park Cancer Institute, and the Hauptman-Woodward Medical Research Institute are seeking an outstanding scientist with a strong research program in bioinformatics to direct the Buffalo Center of Excellence in Bioinformatics (CEB). The Director will have an academic appointment at the University at Buffalo and be able to continue a research program and have access to venture capital for appropriate business ventures. The newly founded CEB represents a merger of high performance computing, high-end visualization, genomics, proteomics, and bioimaging enabling critical contributions to science and health care in the 21<sup>st</sup> century. The Center is funded through industry, the State of New York, and the academic partners. The Director will participate in significant growth in tenure-track faculty and staff.

We are seeking an individual with experience in analyzing and integrating genomic and proteomic data being produced globally. The ability to embrace protein structure analysis, gene and protein functional information, data from patients, preclinical and clinical trials, and metabolic pathways of numerous species is important. The ability to collaborate with investigators in proteomics including mass spectrometry and protein matrices used to assess protein structure and function and drug design; identification of sequence-related functions among major classes of proteins; and interaction with mapping of the human proteome is desirable. Individuals with experience or interest in commercial application of bioinformatics are encouraged to apply. Familiarity with patent and commercialization strategies; interaction with companies using bioinformatics, proteomics, genomics, and other biotechnology strategies is desirable.

The University, Roswell Park Cancer Institute, and other affiliated research institutions include Centers for Structural Genomics and Proteomics; Microbial Pathogenesis; the Women's Health Initiative; a Center for Single Molecule Kinetics; and an Institute for Laser Photonics and Biophotonics with total annual funding of \$90 million. There are over 100 faculty associated with these Centers. The University at Buffalo Center for Computational Research is one of the world's leading academic, high performance computing and high-end visualization centers with a high capacity.

The Buffalo CEB includes existing and new laboratories for the study of molecular targeting; expression; proteomics and molecular kinetics; disease modeling; and bioengineering support. Functions for support of the Center include a state-of-the-art high throughput DNA microarray and gene chip core facility; protein scale-up and purification; high throughput robotic combinatorial chemistry and synthetic chemistry capabilities; and robotic protein crystallization techniques. The Hauptman-Woodward Medical Research Institute, a member of the Center, is home to a cadre of scientists expert in x-ray crystallography and molecular modeling. Extensive collaborations with industries exist.

For further information please contact **Dr. Robert Genco, Distinguished Professor and Chair of the Bioinformatics Search Committee, University at Buffalo; 3435 Main Street, Foster Hall, Buffalo, NY 14214-3092; 716-829-2854 (V); 716-829-2387 (F); [rjgenco@buffalo.edu](mailto:rjgenco@buffalo.edu), as well as the following websites: [www.bioinformatics.buffalo.edu](http://www.bioinformatics.buffalo.edu) and <http://genomics.roswellpark.org>. The University at Buffalo is an Equal Opportunity Employer/Recruiter.**



## UNIVERSITÉ DE GENÈVE

The Faculty of Sciences, Geneva University, Switzerland, has an opening for a position as

### Full or Associate Professor in informatics (Professeur ordinaire ou adjoint)

**Responsibilities:** This is a full time appointment comprising at least 6 hours of teaching per week and research activities in the field of formal aspects of software development and multimedia systems. The successful candidate is expected to conduct a vigorous research program in this area.

**Degree of requirement:** Ph.D. or equivalent.

**Starting date:** October 1<sup>st</sup>, 2001, or as agreed.

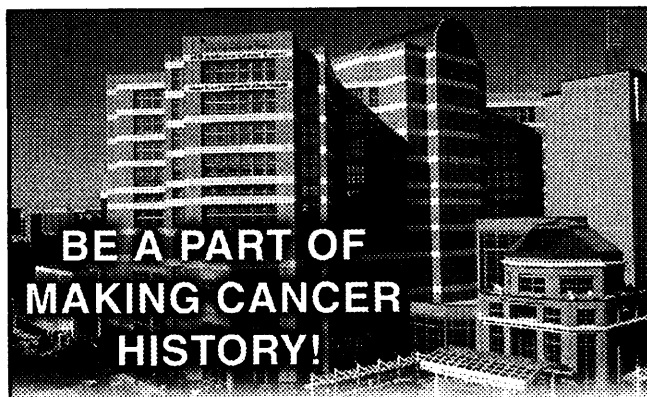
Applications, including curriculum vitae, a list of publications and a short research plan should be sent to the

*Dean of the Faculty of Sciences,  
30 quai Ernest-Ansermet,  
CH - 1211 Genève 4  
Switzerland*

where further information concerning the job description and working conditions may be obtained.

Closing date for applications: **10 August 2001.**

Applications from women are particularly welcome.



The University of Texas M. D. Anderson, ranked the #1 cancer center in the country and nominated in four other categories by *U.S. News & World Report*, is actively recruiting for a

### Director, Project Management Clinical Research Planning

In this key role, you'll be responsible for providing staff support to research planning efforts throughout the 12 departments within our Division of Cancer Medicine. Additional duties include developing new research-related programs, assist with our new drug development initiative, and serving as an expert resource for faculty and staff's efforts in preparing NIH and ACS private sector grant writing.

To qualify, the incumbent must possess an advanced degree in science or medically related specialty area, preferably a Ph.D. We also require 3 years' business/research experience in a biotech or academic setting, plus 3 or more years in basic clinical research operations involving grants, contracts, or protocol development.

We offer a highly competitive compensation package. For confidential consideration, please send resumes to: [khhbrown@mdanderson.org](mailto:khhbrown@mdanderson.org) or mail to: Human Resources, Attn: Kim H. Brown, Executive Recruiter, UT M. D. Anderson Cancer Center, 1515 Holcombe Blvd., Box 220, Houston, TX 77030. EEOE, Smoke-free environment.

THE UNIVERSITY OF TEXAS  
MD ANDERSON  
CANCER CENTER  
*Making Cancer History*

## FACULTY POSITIONS IN VIROLOGY AND IMMUNOLOGY

### Texas Tech University Health Sciences Center

**ASSISTANT AND ASSOCIATE PROFESSOR TENURE TRACK POSITIONS.** The Department of Microbiology and Immunology is seeking candidates for **multiple** faculty positions at the level of ASSISTANT and/or ASSOCIATE PROFESSOR. The department is especially interested in candidates with research in the area of the biology or pathogenesis of animal or human viruses and in the area of immunology. Particular areas of interest include **AIDS, CANCER, EMERGING INFECTIOUS DISEASES, AND MATERNAL-FETAL MEDICINE.** Groups of investigators with programmatic themes are encouraged to apply. Individuals with a Ph.D., M.D., and/or D.V.M. degrees, postdoctoral experience, and a strong record of research accomplishments will be considered. Applicants at the Associate Professor level are expected to have an established extramurally funded research program. New faculty will be expected to establish vigorous research programs supported by extramural sources and participate in the teaching of medical and graduate students. The department is beginning a major faculty expansion to complement existing strength in bacterial and fungal biology and pathogenesis. The departmental expansion will include additional new laboratories and major equipment acquisition. **Substantial start-up funds** will be available to new faculty.

The Health Sciences Center is part of the Texas Tech University System, the only university system in the state with a comprehensive academic campus, law school and medical center on the same campus. Texas Tech is the largest research university system in West Texas, a Carnegie I institution providing education and support to approximately 25,000 students. This represents a unique opportunity to live in a college campus environment where the cost of living is affordable and opportunities abound.

Submit curriculum vitae, a description of research accomplishments and a list of at least three individuals for contact to provide letters of reference to be sent by August 15, 2001 to **Dr. Ronald C. Kennedy, Professor and Chairman, Department of Microbiology and Immunology, Texas Tech University Health Sciences Center, 3601 4<sup>th</sup> Street, Lubbock, Texas 79430-6591.**

*TTUHSC is an EEO/AA/ADA Employer.*



NATIONAL CENTER FOR COMPLEMENTARY & ALTERNATIVE MEDICINE  
NATIONAL INSTITUTES OF HEALTH

**DIRECTOR  
OFFICE OF CLINICAL AND REGULATORY AFFAIRS**

**THE CHALLENGE:** The National Center for Complementary and Alternative Medicine (NCCAM), NIH, is seeking exceptional candidates for the position of Director, Office of Clinical and Regulatory Affairs. This new position offers a unique opportunity to help design, oversee and monitor the conduct of clinical trials in an entirely new area of research—complementary and alternative medicine. The incumbent will organize the program that insures that these studies adhere to the highest ethical, scientific and regulatory standards.

**THE REQUIREMENTS:** Candidates must have a doctorate or equivalent in the health sciences and have an established record of leadership in the design, conduct and/or management of clinical trials. Practical experience in bioethics, biostatistics, and familiarity with procedures for investigational drugs and adverse event reporting requirements are extremely desirable. U. S. Citizenship is required. Salary is commensurate with qualifications and experience. Go to <http://nccam.nih.gov/nccam/an/employment/> to see the full announcement and information on how to apply. Send completed applications to:

National Center for Complementary and Alternative Medicine, NIH  
Human Resource Office  
Building 31, Room 5B58, 31 Center Drive, MSC 2182  
Bethesda, MD 20892-2182

**APPLICATIONS MUST BE POSTMARKED BY JULY 16, 2001.**

**NIH IS AN EQUAL OPPORTUNITY EMPLOYER**

**POSTDOCTORAL POSITIONS IN  
MOLECULAR AND CELLULAR NEUROSCIENCE**

The focus of the Laboratory of Molecular Pathophysiology, National Institute of Mental Health is the investigation of disease and medication-induced changes regulating neuroplasticity and cellular resilience. Projects will involve genomics and proteomics studies, as well as morphometric and histochemical analyses of brain tissue from transgenic and knockout mice of neuropsychiatric disorders, human brain tissue and cell culture models.

The successful candidate will have a PhD in Molecular Biology, Cell Biology, Neuroscience or related discipline, and less than five years of postdoctoral research experience. The positions are located within the NIH Intramural Research Program in Bethesda. Salary will be commensurate with NIH guidelines and experience. Please send *curriculum vitae* and three letters of reference to:

Husseini K. Manji, MD, Chief  
Laboratory of Molecular Pathophysiology  
National Institute of Mental Health  
Building 49, Room B 1 EE 16  
49 Convent Dr. MSC 4405  
Bethesda, MD 20892-4405  
FAX 301/480-0123  
email: [manjih@intra.nimh.nih.gov](mailto:manjih@intra.nimh.nih.gov)

**NIH IS AN EQUAL OPPORTUNITY EMPLOYER**



**NIH Health Scientist Administrators**

The Center for Scientific Review (CSR) at the National Institutes of Health (NIH) seeks to identify highly qualified research scientists who are interested in serving as Scientific Review Administrators for NIH study sections. They should have broad scientific knowledge of, and a history of proven independent research experience in, one of the following areas: AIDS research, behavioral science, bioanalytical chemistry, biochemistry, bioengineering, bioinformatics, biophysics, biostatistics and/or research design, cancer research, cell biology, epidemiology of aging, immunology, instrumentation, microbiology, neuroscience (visual perception), neurodegeneration, proteomics, psychopathology, social sciences, or structural genomics.

Applicants should be highly motivated individuals with excellent judgment and highly developed communication, analytic, interpersonal, organizational and writing skills. These individuals will shape the future of scientific review.

Scientific Review Administrators are responsible for understanding the current state and identifying future directions of a specific area of biomedical and behavioral science; selecting members of review panels; managing study section meetings; facilitating interactions with study section members and communicating the results of their deliberations and recommendations to applicants and the staff of the NIH institutes that fund the research.

Applicants must have: a Ph.D. or equivalent degree (or have equivalent training and experience), postdoctoral research training, a significant record of independent research accomplishment, and administrative experience. Salary will depend on experience and accomplishments. A recruitment or relocation bonus may be available.

Please send your curriculum vitae to:

Jean K. Paddock, Ph.D.  
Center for Scientific Review  
National Institutes of Health  
6701 Rockledge Drive, Room 5100  
Bethesda, MD 20817  
or  
[SRAJobs@mail.nih.gov](mailto:SRAJobs@mail.nih.gov)

Selection for all positions will be based on merit, with no discrimination for non-merit reasons, such as race, color, sex, national origin, marital status, handicap, age, sexual orientation, or membership/non-membership in an employee organization. Deadline for consideration: July 6, 2001.

*NIH is an Equal Opportunity Employer*

## FACULTY OPPORTUNITIES

The University of Texas M. D. Anderson Cancer Center, ranked the #1 cancer center and nominated in four other categories by *U.S. News & World Report*, is the world's largest treatment facility for oncological diseases. Located within the Texas Medical Center campus in Houston, our location provides access to a world renowned medical community and the splendid cultural and recreational diversity of a sophisticated, metropolitan area that is the country's fourth largest city.

Opportunities available in the following:

- Biochemistry & Molecular Biology
- Biomathematics
- Cancer Biology
- Carcinogenesis
- Experimental Therapeutics
- Immunology
- Molecular Genetics
- Molecular & Cellular Oncology
- Molecular Pathology
- Molecular Therapeutics
- Veterinary Medicine & Surgery

The University of Texas M. D. Anderson Cancer Center provides competitive salaries and generous benefits. Interested BC/BE candidates are invited to send a copy of their CV and a letter describing their clinical and academic interests to: Glenda C. Johnston, Faculty Academic Affairs, 1515 Holcombe Blvd., Box 201, Houston, TX 77030; or e-mail: [gjohnston@mdanderson.org](mailto:gjohnston@mdanderson.org). For additional information please call (713) 792-4238.

THE UNIVERSITY OF TEXAS  
MD ANDERSON  
CANCER CENTER  
*Making Cancer History™*

The University of Texas M. D. Anderson Cancer Center values diversity in its broadest sense. Diversity works at M. D. Anderson.  
EEO/AA Smoke-free environment.



## Department of Biology BIOINFORMATICS

The Department of Biology, University of Waterloo, invites applications for a **tenure track faculty position** in the field of Bioinformatics. We are particularly interested in applicants in the areas of functional genomics and proteomics, but will consider candidates with demonstrated research excellence in other areas. The position is at the assistant professor level, but outstanding candidates at other ranks will be considered. Bioinformatics has been identified as a strategic area for the University, and we have launched a new joint Computer Science - Biology undergraduate program. The Bioinformatics Program has been successful in attracting a large cohort of outstanding students. Duties of the incumbent will include research, teaching at the undergraduate and graduate levels, and graduate student supervision.

Applicants must have a Ph.D. and be prepared to establish an active research program. Applicants should send their curriculum vitae, the names of three individuals willing to furnish letters of reference, and a brief outline of their future research direction to: Dr. William D. Taylor, Professor and Chair, Department of Biology, Faculty of Science, University of Waterloo, Waterloo, Ontario, N2L 3G1 Canada. The closing date for applications is **Sept. 28, 2001**. Anticipated starting date is May 1, 2002.

Canadian citizens or Permanent Residents will be considered first for this position. *The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities.* This appointment is subject to the availability of funds. Additional information on the Department and the positions is available at <http://www.science.uwaterloo.ca/biology/biology.html>.

## LumiCyte Visit our web site at [www.lumicyte.com](http://www.lumicyte.com) for other positions in Protein Discovery, Surface and Polymer Chemistry & Bioinformatics

LumiCyte is a world leader in providing new medical knowledge by utilizing its patented Protein BioChips and informatics products that will revolutionize medicine. The Company expects to become the worlds leading provider of information and service products beyond the laboratory.

### Senior Scientist, Data Acquisition for BioChip-based Protein Mapping and Discovery

This Senior Scientist will be part of an advanced team focused on reading BioChips with arrays of affinity capture devices designed to map trace levels of proteins in biological fluids. You will be responsible for overseeing mass spectrometric data acquisition efforts and assisting with the comprehensive data analysis of potential biomarkers from patient samples. Candidates with extensive experience in mass spectrometry (esp. SELDI), along with experience in protein chemistry and assay development are preferred. Must possess Ph.D. in Chemistry/Life Sciences and at least 6 years postdoctoral/industrial research experience.

### Senior Scientist - Biomarker Characterization

This Senior Scientist will be part of an advanced team focused on the discovery and characterization of new protein biomarkers from patient samples using BioChips with arrays of affinity capture devices. Responsibilities will include comprehensive data analysis of potential biomarkers and detailed structural characterization of novel biomarkers utilizing separation science and advanced mass spectrometric methods. The successful candidate must possess experience in protein purification, fractionation and affinity enrichment, micro-scale chromatographic separation and mass spectrometry (both ESI and MALDI). A Ph.D. in Chemistry/Life Sciences and at least 6 years of post doctoral/industrial research experience are required. A strong publication record in protein characterization is essential.

LumiCyte offers a pre-IPO opportunity, competitive salary and benefits including stock options. For consideration please send your resume to [resumes@lumicyte.com](mailto:resumes@lumicyte.com) Attn: #Science Jobs. LumiCyte is located at 48480 Lakeview Blvd., Fremont, CA 94538. FAX: 510-226-4901.

*LumiCyte is an Equal Opportunity Employer.*

## POST DOCTORAL - REPRODUCTIVE BIOLOGY

### Animal Agriculture Sector • St Louis, MO •

**Monsanto Company** is a leading global provider of technology-based solutions and agricultural products that improve farm productivity and food quality. We currently seek a detail-oriented professional to join our Animal Agricultural Group, A Unit of Monsanto Company, St. Louis.

As a part of a research team responsible for developing DNA staining methodologies applicable to flow cytometry of mammalian cells, the successful candidate will work across functional areas with chemists, molecular biologists and engineers to help identify new reagents and procedures that can be used for sorting of mammalian gametes. In addition, the team player will provide the principal technical direction for flow cytometric aspects of the research project, but will work closely with other project team members to develop and test new DNA stains and sorting procedures as well as their effect on fertility in cattle and swine. This important role necessitates a Ph.D. in Reproductive Biology, Biochemistry, Physiology or related field plus previous experience with flow sorting applications. Experience working with oocytes and/or sperm cells, fluorochrome-labeling techniques and biochemical analysis of DNA is preferred, but not essential.

We offer a competitive salary and benefits package. If you have a desire to be part of our organization, please submit resume using our preferred method of response: <http://respond.webhire.com/job/id?604-r383-J1>. Monsanto is an equal opportunity employer. We value a diverse combination of ideas, perspectives, and cultures. EEO/AA EMPLOYER M/F/D/V.

**MONSANTO**



[www.monsanto.com](http://www.monsanto.com)





## Max-Planck-Institut

für Wissenschaftsgeschichte

For a new unit with the title "Information Management" the Max Planck Institute for the History of Science announces

### three openings for Research Fellows

This new group will be responsible for the planning, development, implementation and scholarly evaluation of digital research projects at the Institute. This work will cover two principal areas: developing tools to process and utilize external data, including sources, text, images, artifacts, bibliographical data, and electronic journals; and digitizing internal data, as well as making said data available for research. In addition, this unit will manage, expand and network the already existent digital libraries, in cooperation with the Institute's library staff and with the Max Planck Society. Finally, the group will assist the Technical Assistance department of the Institute in advising scholars on the optimal use of hardware and software.

We are looking for persons with university degrees, personal experience with research in the humanities, and sufficient qualifications in the area of information technology to accomplish the above-mentioned tasks. Good working knowledge of English is required.

The positions are paid according to the valid German scale for wissenschaftliche Mitarbeiter up to BAT 1b, which corresponds approximately to the assistant/associate professor level.

Women are encouraged to apply. Qualifications being equal, precedence will be given to candidates with disabilities.

Applicants are requested to include a description of their previous work in information management and/or the humanities along with the usual documents (recommendations, CV, list of publications). Applications should be sent not later than **July 31, 2001** to:

**Max Planck Institute for the History of Science, Verwaltung,  
Kennwort IT, Wilhelmstraße 44, 10117 Berlin, Germany**



**NATIONAL INSTITUTES OF HEALTH  
NATIONAL EYE INSTITUTE**

## Job Opportunities

The National Eye Institute Intramural Program at the NIH campus, Bethesda, MD., is seeking highly qualified Postdoctoral Fellows, Research Associates and Staff Scientists in the following areas:

- **Molecular Biology**
- **Cell Biology**
- **Immunology**
- **Psychophysics**
- **Biochemistry**
- **Epidemiology**
- **Biostatistics**

**Salaries range from \$29,000 to \$118,400 per annum,  
based on experience and type of appointment.**

NEI offers an extensive benefits package that you may be eligible for, depending on the appointment mechanisms: Health Benefits, Life Insurance, Retirement Benefits, Annual and Sick Leave, Formal Training Program, Recruitment Bonus, Retention Allowance, Relocation Allowance, Loan Repayment Program, and Travel Benefits.

Candidates interested in specific job opportunities at the NEI may visit the NEI web site at <http://www.nei.nih.gov/> listing the most current positions available.

**NIH/NEI is an Equal Opportunity Employer**

## THE WORLD HEALTH ORGANIZATION



seeks a

**COORDINATOR, P.06**

### PRODUCT RESEARCH AND DEVELOPMENT

The World Health Organization is seeking to appoint a Coordinator, Product Research and Development (PRD), Special Programme for Research and Training in Tropical Diseases (TDR), in the Communicable Diseases Cluster, with duty station in Geneva Switzerland.

Under the Director of TDR, the Coordinator of PRD will be responsible for providing scientific and managerial leadership of the entire product development area (PRD) within TDR (head count about 20 FTE's, budget above \$10m p.a.). In particular, the candidate will be responsible for 1) developing and/or reviewing overall policies, strategies and modus operandi; 2) monitoring the entire development portfolio; 3) reviewing all of PRD's research activities; 4) establishing teams to provide PRD with scientific and technical advice; 5) line managing staff; 6) managing PRD's technology transfer programme; 7) assessing resources and assisting Director TDR in fund-raising; 8) participating with the Health Technologies and Pharmaceuticals (HTP) cluster in the WHO-wide inter-cluster vaccine research initiative; 9) interacting with research-based pharmaceutical industry on tropical disease research and development.

The ideal candidate will have the following qualifications:

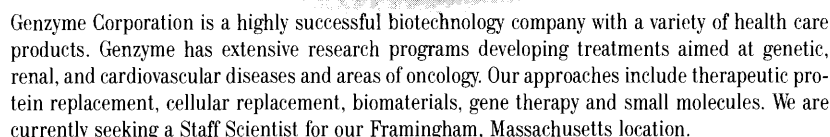
- Doctoral degree in medical, biological or natural sciences from a recognized university; good academic background including record of achievement in fund-raising for, & publishing results of appropriate research would be assets; knowledge of discovery development, production, testing and registration of drugs, vaccines, diagnostics & biologicals; high reputation in academic and industry circles of product R&D at international level; ability to elicit respect and constructive cooperation of senior staff in academia, industry, health ministries & donor agencies, and of colleagues & subordinates; sensitivity to needs of disease-control programmes in developing countries; broad knowledge of tropical diseases and international standards of good practices (GLP, GMP, GCP), regulatory requirements, international drug registration, patent & licensing procedures would be assets.
- Extensive (+10 years) experience at senior scientific/managerial level in an international, research based pharmaceutical company of research, development, regulation & licensing of pharmaceutical products; record of achievement in discovery, development and registration of successful product(s); experience in legal and commercial aspects of product research and development would be an asset.
- excellent knowledge of English or French with a good working knowledge of the other.

The rate of salary is based on the UN professional salary scale at the P06 grade level: annual salary (net of tax) US\$ 72407 at single rate and US\$ 78334 with primary dependants, plus applicable post adjustment (19.6% of the above figures, the percentage is to be considered as indicative since variations may occur either upwards or downwards) and benefits of the UN common system.

Interested candidates should send their applications by 22 June 2001 quoting the reference "vacancy notice n° P/HQ/CDS/01/34" to Human Resource Services, World Health Organisation, CH-1211 Geneva 27 or by e-mail to [vacant@who](mailto:vacant@who).

WHO has a smoke-free environment





As a key member of our dynamic research team engaged in discovering novel therapeutics for cancer and other diseases, this opportunity combines your scientific creativity and a strong investigative orientation with the ability to design and implement novel bioinformatics tools. You will interact closely with diverse groups, internal and external, in the areas of gene expression analysis, functional genomics and/or target discovery. Requires a PhD in life sciences or equivalent and 0-3 years postdoctoral experience in research or information technology. A demonstrated ability in genomics or bioinformatics is essential, as is an in-depth understanding of modern computational methods for biological sequence analysis. Strong programming experience in one or more languages (C/C++, Perl, Java, XML or SQL) and familiarity with UNIX, PC and Macintosh computing environments are a must. Excellent written and verbal communication skills are essential. Job Code: 00-0002711

*Genzyme rewards success with an excellent compensation and benefits package, including 3 weeks paid vacation, a 401(k) plan with company match, extensive insurance benefits, an Employee Stock Purchase Plan. Interested candidates should forward resume, including Job Code, to: Genzyme Corporation, Human Resources, One Kendall Square, Cambridge, MA 02142. Email: [biojobs@genzyme.com](mailto:biojobs@genzyme.com). (Job Code # must appear in subject line.)*

An equal opportunity employer, Genzyme is committed to a culturally diverse workforce.

The pharmaceutical market is rapidly changing; evolving and maturing everyday as new ways and tools are being developed to improve the quality of human life. Ideas, outstanding performance and the growth and caring of our people are at the core of our value system. Our future is in the hands of the individuals who make up our company.

The job requires experience with experimental laboratory techniques including protein analysis, enzymatic analysis, DNA manipulation and protein expression in mammalian cells with good cell culture technique. Responsibilities will also include collection, organization, interpretation, and presentation of data. An understanding of the experimentation in context of program objectives and the literature is important. The position will require the ability to work within a group and independently. Interest and experience in cancer research would be helpful. PhD or equivalent experience is required.

Our commitment to our employees includes an excellent salary and a comprehensive benefits package. To apply, please forward your cover letter and resume to: **DuPont Pharmaceutical Company, Attn. Human Resources - 002900, Experimental Station, E400/2413, Route 141 & Henry Clay Rd., Wilmington, DE 19880; E-mail: [AMSresume@dupontpharma.com](mailto:AMSresume@dupontpharma.com). EOE.**



**Science @**

The search stops here.

career advice  
e-mail job alerts  
graduate programs  
job postings

**www.sciencecareers.org**

## Bioinformatics at Boston University

Four years ago, Boston University established one of the first **Ph.D. programs in Bioinformatics** in the nation. Our doctoral training program in Bioinformatics is supported by an IGERT grant from the National Science Foundation.

We also have established an affiliated **Professional Master's Program in Bioinformatics**, with funding from the Alfred P. Sloan Foundation.

At Boston University, the Bioinformatics program aims to build a foundation for the understanding and design of biological systems using computational ideas, methods, and tools combined with experimental investigations.

**Among the 50 affiliated faculty members** (3 of whom are members of the National Academy of Sciences) are Charles DeLisi (Program Director), Charles Cantor, Temple Smith, Simon Kasif, Bob Berwick, Tom Tullius, Geoffrey Cooper, Ulla Hansen, Zhiping Weng, Maxim Frank-Kamenetskii, Carlos Hirschberg, and Jim Collins.

### Research topics include:

- DNA structure and technology
- whole-genome analysis
- protein engineering
- protein-protein interaction
- proteomics
- gene regulation pathways
- genetic switches
- cancer
- computational biology and biocomputing

Interested individuals having a degree in biology, chemistry, mathematics, computing or other science are invited to apply for admission to the Ph.D. or Master's program.

Boston offers an unmatched set of stimulating opportunities for education and employment in bioinformatics and biotechnology.

The Boston University Bioinformatics program maintains active collaborations with The Institute for Genomic Research, the Whitehead/MIT Center for Genome Research, the National Center for Biotechnology Information, and local industry.

We also are seeking to fill several **postdoctoral research positions** at various levels (research scientist, senior postdoctoral fellow, postdoctoral fellow). These scientists will conduct research in computational genomics, bioinformatics, computational biology, functional genomics, and comparative genomics. We would be happy to consider strong applications from postdoctoral researchers seeking to enter the field of bioinformatics from the life sciences, physics, computer science, learning, or mathematics.

For more information, please see <http://bioinformatics.bu.edu>

To request an application to the graduate program, please email [mkuraoka@bu.edu](mailto:mkuraoka@bu.edu)

For postdoctoral and research scientist positions, please email [clyman@bu.edu](mailto:clyman@bu.edu)

*Boston University is an equal opportunity employer, and encourages women and minorities to apply*

## Open Position

### Genetic Modeling Software Developer

**Seeking a member for the molecular breeding team to be responsible for the development of algorithms and applications for use by scientists in molecular-marker-assisted breeding.**

This position will require interacting with scientists involved in molecular-marker-assisted breeding, plant breeding, biometry, and genomics. The candidate will be responsible for understanding the nature and needs of the user community and developing corresponding mathematical algorithms and appropriate requirement specifications for needed software solutions.

Understanding of genetic phenomena and statistical approaches classically used for the analysis of genetic data will be necessary. Application of professional software development methodology will be required in the design, development, troubleshooting and debugging of these software solutions. Besides being involved in developing software solutions arising from the above-mentioned specifications, the candidate will be in charge of providing appropriate training and support for their use.

Qualifications include a PhD or equivalent in genetics, bioinformatics, applied mathematics or a related field, or extensive experience in (genetic) modeling software development. Practical knowledge of mathematical programming languages (including a strong knowledge of Fortran) is essential. Experience of using statistical analysis packages, notably Splus, would be a further advantage. Ability to work in a team environment, excellent listening and communication skills are also required.

Position is based near Toulouse, in the South-West of France. It will require national and international travel, especially within Europe. Proficient use of English is essential—working knowledge of French is a plus.

*Syngenta is the world's leading agribusiness company operating across all major areas of crop protection and seeds. Syngenta has more than 20,000 employees worldwide and major research and manufacturing facilities located in more than 20 countries worldwide.*

To apply, please send cover letter and resume marked "Genetic Modeling" by e-mail to:

[michel.ragot@syngenta.com](mailto:michel.ragot@syngenta.com)

Or by post to: M. Ragot, BP 27, F-31790 Saint-Sauveur, France.

The Syngenta logo features the word "syngenta" in a bold, lowercase, sans-serif font. A stylized leaf graphic is positioned above the letter 'g'.



# Solutions for Genomic Research

*Incyte Genomics, Inc. is the leading provider of an integrated platform of genomic technologies designed to aid in the understanding of the molecular basis of disease. Incyte develops and markets genomic databases and partnership programs, genomic data management software, microarray-based gene expression services, related reagents and services. These products, programs and services assist pharmaceutical and biotechnology researchers with all phases of drug discovery and development including gene discovery, understanding disease pathways, identifying new disease targets and the discovery and correlation of gene sequence variation to disease.*

## CAREER OPPORTUNITIES IN THE FOLLOWING:

- **Bioinformatics**
- **Research & Science**
- **Target Validation**
- **Software Development**

For more information, visit Incyte's web site at  
**[www.incyte.com](http://www.incyte.com)**.

To apply, please send cover letter and resume to  
**[science@incyte.com](mailto:science@incyte.com)**.

The employees of Incyte, our greatest asset, provide the tremendous energy, talent and expertise that will enable us to help revolutionize health. We're looking for individuals who share our vision and want to play a role in defining the future. We offer competitive salaries, an outstanding benefits package and significant opportunities for professional growth. Incyte Genomics, Inc. values the talents of our diverse workforce and is proud to be an Equal Opportunity Employer. F/M/V.



**IncyteGenomics**

## Explore the Possibilities

**At Perlegen Sciences**, our vision is to improve people's lives by revealing the fundamental connections between genes, drug response, and disease. To achieve this aim, we are currently engaged in a major new initiative to build a high-throughput whole-genome scanning capability that will be used to scan fifty whole genomes and to discover the broader patterns of human genetic variation. The exciting work to understand how particular patterns impact the health of the individual will involve the collaboration of research scientists and bioinformatics technology developers like you!

We are seeking highly creative individuals with strong analytical and programming skills and experience in bioinformatics technology development in the areas of:

**Bioinformatics Programming and Analysis**  
**High-Density Wafer Design**  
**Image Processing**  
**Genomic Database Design and Programming**

For more information on these positions and other opportunities at Perlegen, visit our website at

**[www.perlegen.com](http://www.perlegen.com)**

In addition to receiving a competitive salary and benefits package, you'll work with the latest technologies in a dynamic environment where you'll have the resources you need to get the job done. For consideration, please mail, fax, or email your resume to: Perlegen Sciences, Human Resources, 3380 Central Expressway, Santa Clara, CA 95051. Fax: (408) 731-5455. Email: [Perlegen\\_HR@perlegen.com](mailto:Perlegen_HR@perlegen.com). We are an equal opportunity employer.



## IT'S ALL ABOUT IMPACT.

Work where your expertise will be visible, valued and powerful: Microbia – an expanding, pre-IPO biotech firm located in Cambridge, MA. We're using an entirely different and innovative methodology in microbial research to develop a portfolio of anti-infective drugs and microbial production technologies. With great science and a solid financial backing, we continue to attract scientists from the nation's premier pharmaceutical/biotech companies and research centers.

### **Senior Drug Discovery Leader**

Bring your extensive, senior-level drug making experience to this critical position. You'll strengthen and manage multi-disciplinary groups focused on identifying, developing and advancing lead anti-infective compounds into the clinic. To qualify, you'll need 10+ years of leadership experience in medicinal chemistry and/or pre-clinical development, including 5 or more years in drug discovery and development. Extensive management skills and an established track record of successful drug discovery are essential, as are experience with toxicological and pharmacological studies. Familiarity moving compounds successfully through IND submission is a strong plus. Job Code: DDP.

Take your place on our innovative team. We're located in one of the world's premier biotech centers, with easy access to the ocean, lakes and mountains as well as a world of educational, recreational and cultural opportunities. Email your resume, indicating Job Code, to: [hr@microbia.com](mailto:hr@microbia.com) or fax to: (617) 494-0908. EOE.

**Microbia**  
**[www.microbia.com](http://www.microbia.com)**

#### New & Established Investigators

We are currently seeking additional faculty in key focus areas of research to add to our established team of investigators.

The Centre for Molecular Medicine and Therapeutics (Director, Michael R. Hayden) at the University of British Columbia in beautiful Vancouver, B.C. seeks applications for several positions from the assistant professor to the professor level. CMMT's scientific mandate is to advance fundamental understanding of the molecular function and structure of genes as the key to improved diagnosis, treatment and prevention of health problems in children and adults. The CMMT includes outstanding infrastructure support such as a bioinformatics core facility, mouse transgenic and breeding facility, DNA sequencing facility and a facility for Experimental Therapeutics in Animal Models of Human Disease. It is a joint alliance of Children's & Women's Health Centre of British Columbia, the University of British Columbia (UBC), Merck Frosst Canada Inc. and the Government of British Columbia. Applicants should ideally hold an M.D. or Ph.D. degree or equivalent, a minimum of two years post doctoral research experience and a record of accomplishment that demonstrates their potential as an independent research candidate with special interests in genetics, computational biology, bioinformatics, animal models of human disease, and/or model organism research.

We are especially interested in applicants working in the following fields:

- **Animal Models of Human Disease**  
mouse, *C. elegans*, *Drosophila*, etc.
- **Bioinformatics**  
sequence analysis  
comparative genomics
- **Mouse Pathology**  
developmental biology
- **Human Genetics**  
phenotype/genotype correlations  
mechanisms of pathogenesis

Qualified candidates interested in joining an energetic and motivated group of faculty at the University of British Columbia are encouraged to apply. Please send CV, names of three references and a brief statement of research interests to: **Lynne Baker, lbaker@cmmt.ubc.ca** Centre for Molecular Medicine and Therapeutics, 980 West 28th Avenue, Vancouver, B.C. V5Z 4H4 (<http://www.cmmt.ubc.ca>)

The deadline for applications is July 1, 2001. UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified persons to apply. This is a full-time tenure track appointment which is subject to final budgetary approval. Salary and rank will be commensurate with qualifications and experience. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.



Children's & Women's  
Health Centre of  
British Columbia



University of  
British Columbia



## It's More Than A Career. It's A Defining Experience.

**G**laxoSmithKline joins together the talented people of Glaxo Wellcome and SmithKline Beecham to create the world's leading research-based pharmaceutical company. We're the market leader in four of the five largest therapeutic categories, with unrivaled global marketing strength and powerful R&D and Manufacturing capabilities supporting a research spend of \$4 billion and sales of \$24.9 billion annually. Best of all, the industry's greatest, most innovative minds are now assembled under one name. If your goal is to change the world with innovative medicines, now is the time to join our respected team. We currently have an opportunity available in our state-of-the-art facility, located in suburban Philadelphia, PA.

#### Assistant Director/Associate Director

You will design, conduct and evaluate studies aimed at understanding the effects of drugs in model systems of lung disease, in addition to supervising the work of one or two additional Ph.D. Scientists who will be directly involved in the identification of drug candidates for progression and developing the scientific rationale for new molecular targets. You will also aid in the evaluation and development of staff members, definition of drug discovery priorities and act as a senior representative of the department at internal meetings. We require a Ph.D. in Pharmacology, Immunology or Biochemistry with 4-8 years of pharmaceutical research experience in the area of respiratory diseases including asthma or COPD. At least 3-5 years of experience supervising a team of scientists, including one or more PhD level staff, while maintaining their own research is also required. (Job Code: 01-0815)

#### Investigator/Sr. Investigator

You will independently design, conduct and interpret experiments examining the effects of drugs in model systems, especially as it applies to lung inflammation, airways remodeling or fibrosis seen in COPD. You will also collaborate with other members of the department to develop data to identify drug candidates for further progression, as well as develop the rationale for new molecular targets. We require a Ph.D. in Pharmacology, Physiology, Immunology or Biochemistry and 2-3 years of post-doctoral research experience with a focus on the pulmonary system. The ability to supervise one or two persons, while conducting their own research, as well as expertise in both animal models and cell based systems is preferred. (Job Code: 01-0816)

#### Investigator/Sr. Investigator

You will independently design, conduct and interpret experiments examining the effects of drugs in model systems to modify airway or alveolar epithelial function, especially as it applies to changes seen in COPD. Working with other members of the department, you will also develop data to identify drug candidates for further progression, as well as develop the rationale for new molecular targets. We require a Ph.D. with at least 2-3 years of post-doctoral research experience in Pharmacology, Biochemistry or Cell Biology with a focus on Epithelial Cell Biology. The ability to supervise one or two persons, while conducting their own research, as well as expertise in both animal models and cell based systems is preferred. (Job Code: 01-0817)

GlaxoSmithKline is dedicated to an innovative workplace and supports you with career long opportunities and learning. We offer a competitive benefits and compensation package designed to attract and retain the very best. For confidential consideration and efficient processing, please mail your resume to: GlaxoSmithKline, Job Code, P.O. Box 40047, Philadelphia, PA 19106 or visit our website: [www.gsk.com](http://www.gsk.com) Indicating Job Code is essential. Principals only, no agencies please.

*Developing talent through equality of opportunity, M/F/D/V.*



GlaxoSmithKline



## We're Writing a New Chapter in & Drug Discovery & Development

**Cytokinetix** is focused on cytoskeletal pharmacology. The cytoskeleton is a validated area for the development of clinically effective agents. The potential for developing a new class of drugs in this area is huge. Cytoskeletal involvement is apparent in many different diseases. Cytokinetix is committed to advancing drug discovery and development in this area through the identification and development of small molecules for clinical studies. We are working in several different therapeutic areas to capture the broad opportunities presented by targeting the cytoskeleton. Our proprietary biology and cellular informatics platforms allow us to selectively target important cytoskeletal proteins. Our R&D staff has already realized their first success in the area with the design and synthesis of a series leading to our first clinical candidate. To fully capitalize on the multiple opportunities presented to us, we are expanding our R&D staff. Join a Pre-IPO biotech leader that is defining a new class of therapeutic agents!

### Scientist, Data Analysis

Requires a BS/MS/Ph.D. in statistics, mathematics, bioinformatics, cell/molecular biology, or related field and 2+ years' data analysis experience. (Job# CMO1-06-SCI)

### Manager, Compounds Library

Requires a BS/MS/Ph.D. (chemistry pref'd) with at least 3-5 years of experience organizing/managing compound libraries at a biotech/pharmaceutical company. (Job# AD01-02-SCI)

### Head of Discovery Informatics

Requires at least 5-8 years of experience in a drug discovery informatics role at a biotech/pharmaceutical company. (Job# AD01-03-SCI)

### Database Administrator/ Developer

Requires a BA/BS or equivalent and 5 years' database administration experience with Oracle database management system. (Job# CMO1-08-SCI)

### Scientist/Manager of HTS

Requires a Ph.D. or equivalent and at least 5-8 years of HTS experience in a pharmaceutical/biotech setting. (Job# AD01-04-SCI)

### Scientist, Genomics

Requires a Ph.D. and 3+ years' post graduate experience. (Job# GN01-02-SCI)

Please visit our website at [www.cytokinetix.com](http://www.cytokinetix.com) for complete job descriptions and for more information on other key scientist and research associate positions available.

We recognize people as our most valuable asset. Our competitive salary and benefits package includes 401K, generous stock options, dental & medical insurance, a vision-care plan, domestic partner coverage, paid vacations, just to name a few. This IS that rare opportunity you've been looking for - that opportunity to make scientific contributions that WILL make a difference! Send your cover letter and resume to:



Cytokinetix, HR Department  
Attn: (Job# \_\_\_\_\_), 280 East Grand Avenue  
South San Francisco, CA 94080  
FAX: (650) 624-3010 • Email: [hr@cytokinetix.com](mailto:hr@cytokinetix.com)  
We also have openings for Research Associates, Chemists, and IT professionals. Please visit our website for more details.

**CYTOKINETIX**  
[www.cytokinetix.com](http://www.cytokinetix.com)

Principals only. EOE

## Take Your Curiosity

## To The Edge...

...with **Pharmacia Corporation**. Success in drug discovery and development has always relied upon the efficient capture, organization and analysis of large quantities of data. With the enormous increases of data now being generated in the context of public and private genome projects, the task of managing biologic data has increased almost exponentially. In order to compete in this increasingly competitive environment, the modern pharmaceutical company needs to incorporate and integrate gene sequence data, gene polymorphism data, gene expression data as well as proteomics data, together with cutting edge analysis tools into its R&D efforts, not only in the context of new target discovery, but to support the development of products in the clinic. Pharmacia therefore believes that a significant strength in Bioinformatics is a critical component for the successful delivery of high quality therapeutics in the next Millennium.

Critical mass is a vitally important component in achieving strength in a research environment. For this reason, Pharmacia is establishing a Global Bioinformatics organization that will be responsible for supporting its research activities at all locations. Although the staff within this organization will be distributed at all sites the Bioinformatics organization will be integrated with respect to databases, analytical tools and research strategies. In order to fully realize the potential of a globally integrated Bioinformatics organization, Pharmacia recognizes the need for strong leadership. **Our St. Louis, Missouri facility** seeks the following professionals:

### BIOINFORMATICS SCIENTISTS, PhD Position # 00-1361

We seek several highly motivated and experienced computational biologists to work closely with molecular biologists and multi-disciplinary drug discovery project teams. This position will involve providing bioinformatic analysis to address therapeutic challenges in inflammation, cardiovascular diseases and oncology. The challenge is to integrate and analyze large, complex data sets, such as sequences, array-based gene expression studies, human genetic studies and model organism studies. Expertise in standard bioinformatics tools (e.g. BLAST, GCG tools etc.) and any of the following areas: transcriptional profiling analysis, signal-transduction, biochemical and regulatory networks, HMMs and profile methods, human genetics (SNPs etc.), protein fold recognition, and homology modeling, will be considered. Candidates will also be expected to develop independent research projects within Pharmacia's therapeutic focus. Successful candidates will possess a Ph.D. with postdoctoral experience or demonstrated equivalent experience. Some experience in scientific programming skills, including scripting in PERL, Python, and or SQL/Oracle in a UNIX operating environment, as well as good communication and writing skills are essential.

We offer generous compensation and benefits, performance rewards, and entrepreneurial opportunities for personal and career development. For immediate consideration, please respond using our preferred online method at: <http://respond.webhire.com/job/id?479-r1361-J3> Or you may fax your resume to the Pharmacia resume processing center, referencing Ad Code #00-1361/Science Magazine, at 520-287-0963. As an EEO/AA employer, Pharmacia Corporation values a diverse combination of ideas, perspectives, and cultures.

# PHARMACIA

[www.pharmacia.com](http://www.pharmacia.com)



## POSTDOCTORAL POSITION IN IMMUNOLOGY

A postdoctoral position is immediately available to study strategies of HIV vaccination in the lab of Dr. Peter C. Doherty. Our HIV vaccine program involves basic immunology research (B-cell, Th-cell and cytotoxic T-lymphocyte studies), HIV vaccine design, and clinical assessment of vaccine efficacy. The applicant should have a Ph.D. or M.D./Ph.D. Please contact:

**Dr. J.L. Hurwitz**  
**Dept. of Immunology**  
**St. Jude Children's Research Hospital**  
**332 N. Lauderdale St.**  
**Memphis, TN 38105**  
**Ph: 901-495-2464**  
**Fax: 901-495-3107**  
**E-mail: julia.hurwitz@stjude.org**

SJCRH is an Affirmative Action/Equal Opportunity Employer.



## POSTDOCTORAL POSITION IN DEVELOPMENTAL AND MOLECULAR BIOLOGY

A postdoctoral position is available to work in pancreas development. Our research is focused in the identification of mechanisms that govern morphogenesis and cytodifferentiation in the mammalian pancreas, and the role that homeobox-containing genes play in such processes [Nature 386, 399 (1997); Nature Genetics 25, 254 (2000)]. Approaches to investigate these problems include the use of transgenic and knock-out mice and the manipulation of embryonic pancreatic explants *in vitro*. The position is ideal for someone with a biological background and laboratory experience, which has recently obtained a Ph.D. and/or M.D. degree and seeks to pursue training in developmental biology. Interested candidates please send their C.V. and the names of three references to:

**Dr. Beatriz Sosa-Pineda**  
**Department of Genetics**  
**St. Jude Children's Research Hospital**  
**332 N. Lauderdale**  
**Memphis, TN 38105**

Equal Opportunity Employer.



## CHAIRMAN OF CHEMICAL BIOLOGY

St. Jude Children's Research Hospital (SJCRH), a premier center for biomedical research, is seeking a visionary leader to establish a new Department in the field of Chemical Biology. Research in the Department will broadly focus on the synthesis, identification and utilization of small molecules as tools for analyzing biological processes and as potential lead compounds for therapeutics. Programs are envisioned that will interface closely with existing expertise in genetics, molecular biology, structural biology, cell biology and functional genomics. The Department will occupy laboratories in a newly constructed Integrated Research Center that will open in the Fall of 2001.

Chemical Biology at SJCRH is a crucial component of the ongoing expansion of the institution's research environment that has included in recent years, the establishment of a Department of Structural Biology, the formation of the Children's Infection Defense Center (CIDC), expansion of the Cancer Center, development of the Hartwell Center for Bioinformatics and Biotechnology, and expansion of programs in non-malignant genetic diseases. Members of the Chemical Biology Department will have the opportunity to interact with investigators from other Departments within SJCRH including Biochemistry, Developmental Neurobiology, Genetics, Hematology/Oncology, Immunology, Infectious Diseases, Molecular Pharmacology, Pathology, Pharmaceutical Sciences, Structural Biology, Tumor Cell Biology and Virology. Outstanding, state-of-the-art core facilities support all research in the institution. A good manufacturing practices (GMP) facility is currently under construction and will provide capabilities for the development and on-site production of vectors, vaccines, antibodies and small molecule therapeutic agents.

SJCRH is a clinical and basic research institute that focuses on the fundamental causes and treatment of catastrophic childhood diseases including cancer, infectious diseases and genetic disorders. Founded by Danny Thomas in 1962, the hospital currently includes approximately 150 basic and clinical investigators organized within a traditional academic environment. SJCRH continues to receive support through the fundraising efforts of the American Lebanese Syrian Associated Charities (ALSAC).

Candidates should have a Ph.D. and/or M.D. degree, an active and competitive research program, an international reputation and a distinguished record of scholarly achievement. Applicants should send a letter of interest and include a curriculum vitae, a brief discussion of scientific goals and the names of three references to:

**CHEMICAL BIOLOGY SEARCH COMMITTEE**  
 c/o James N. Ihle, Ph.D., Chair  
 Department of Biochemistry  
 332 N. Lauderdale  
 St. Jude Children's Research Hospital  
 Memphis, TN 38105

Equal Opportunity Employer

**Department of Anatomy & Neurobiology, College of Medicine,  
University of California, Irvine**  
**Reeve-Irvine Center for Nervous System Regeneration Research**  
**Postdoctoral Positions**

Postdoctoral positions are available as part of the continuing development of the Reeve-Irvine Research Center for Nervous System Regeneration Research. The community of scientists at the University of California at Irvine engaged in studies of aspects of nervous system regeneration are listed below. Stipend levels are highly competitive.

**Susan Bryant and David Gardiner:** Molecular mechanisms of nerve requirement for axolotl limb regeneration; molecular analysis of spinal cord regeneration in axolotls.

**Anne Calof:** Molecular regulation of neuronal stem cell proliferation and differentiation, in vitro and in transgenic model systems.

**Carl Cotman:** Mechanisms of axonal degeneration via local apoptosis and inflammatory mechanisms in the recovery from spinal cord injury.

**Christine Gall:** Neurotrophic factor regulation of chronic nerve compression injury.

**Hans Keirstead:** Demyelination and transplantation strategies in the study of axon and myelin regeneration.

**Arthur Lander:** Molecular mechanisms of axon growth and growth-inhibition; transgenic and gene-knockout approaches.

**Vernon W.H. Lin:** Spinal cord plasticity and repair strategies, functional electric and magnetic stimulation.

**Ronald Meyer:** Optic nerve regeneration; axonal interactions with glia and extracellular matrix.

**Richard T. Robertson:** Mechanisms of target selection of regenerating central axons.

**Oswald Steward:** Genetic modulation of regeneration, synapse growth and plasticity.

**John H. Weiss:** Excitatory amino acid physiology, and cellular mechanisms of neurodegeneration and neuroprotection.

Applicants should include a curriculum vitae, list of publications, a brief summary of training goals, and names and addresses of at least three individuals who can provide letters of recommendation. Applications may be sent attention to one of the participating faculty at the address below.

**Tania Cusack, Center Administrator, MSO  
Reeve-Irvine Research Center Postdoctoral Search  
University of California, Irvine  
2107 Gillespie Neuroscience Research Facility  
Irvine, CA 92697-4292**

*The University of California, Irvine is an Equal Opportunity employer, committed to excellence through diversity.*

**Scientist Positions in  
Cancer Research**

The Ontario Cancer Institute at Princess Margaret Hospital in Toronto is one of North America's largest cancer research centres employing the latest technological approaches to tackle cancer. The Institute is looking for two outstanding individuals (MD or PhD) to lead research programs that will exploit recent advances in the molecular genetics of cancer. He or she will be an accomplished investigator with an established record of achievement and innovation. The Ontario Cancer Institute is affiliated with the University of Toronto and comprises 65 principal investigators and 90 medical, surgical, and radiation oncologists. Appointments can be made at the Assistant, Associate or Full Professor levels. In addition, these positions may be eligible for Canadian Research Chairs.

Applicants should forward their CVs, in confidence, by **June 22**, to **Drs. Sam Benchimol and Jim Woodgett, Co-Chairs, Search Committee, Ontario Cancer Institute, 610 University Avenue, 7-504, Toronto, Ontario, M5G 2M9.**

*We wish to thank all applicants for their interest, however, only those selected for an interview will be contacted. The Ontario Cancer Institute is the Research Institute of Princess Margaret Hospital which along with the Toronto General Hospital and the Toronto Western Hospital, is a member of the University Health Network, an Equal Opportunity Employer. In accordance with Canadian Immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents, although others are welcome to apply.*

**Focus on the future.  
Then shape it.**

At Boehringer Ingelheim, we believe that the future is not an event to be anticipated... but an opportunity to be shaped. We're ready to transform your innovation and drive into the power to define an industry — to develop and market breakthrough pharmaceuticals that enhance the quality of human life.

**Bioinformatics Software Application Specialists**

Multiple positions are available in the bioinformatics group in the IT department. Incumbents will act as interfaces between scientists and the other IT departments by acting as bioinformatics software applications specialists. Incumbents will also perform bioinformatics analysis and be responsible for designing and implementing novel approaches to mining in silico biology data in support of target identification and validation efforts against inflammatory and autoimmune diseases. Positions are also available in the functional genomics group area.

Responsibilities include joining efforts in identifying novel gene targets for inflammatory and autoimmune diseases through mining databases for novel gene family members; developing software to annotate and curate genomes and visualize gene datasets; developing automatic pipeline to mine genomics databases, gene expression, disease progression pathways and biomedical literatures; developing new tools to integrate bioinformatics data; and performing other duties as assigned by management.

The successful candidate will possess a Ph.D. or equivalent in Molecular Biology/Bioinformatics and a MS in Computer Science with 1-3 years' relevant experience preferred; and be familiar with different software programs and databases related to accessing and analyzing gene function and structural information. Must have bioinformatics application development experience with HTML, Java, C/C++, bioperl/biopython, biowidget, UNIX, NT, Oracle, SQL, and be familiar with software programs/algorithms critical to gene expression profiling/proteomics and structural genomics.

At our Ridgefield, CT campus, we offer a dynamic, collaborative environment where insight, inspiration and commitment create opportunity on an entirely new scale. For immediate consideration, please email your resume and salary history to: [biopi@bi-careers.com](mailto:biopi@bi-careers.com); OR send to: Boehringer Ingelheim Staffing Center, PO Box 534, Waltham, MA 02454-0534.

Including the Job Code: AD-SCI/RDBIO in your cover letter or subject line will help us to expedite your request and avoid delays in routing your resume. Please, principals only. Unsolicited agency referrals will not be accepted. We are a proud Equal Opportunity Employer and are committed to offering a healthy, non-smoking work environment, M/F/D/V.



**Boehringer  
Ingelheim**

Bring your future into focus:

Visit [www.bi-pharm.com](http://www.bi-pharm.com)

CONFERENCE

BIOCHEMISTRY

EUROPE

**Submit Search**

*Arrivederci*

**Science @**  
CAREERS

**Meetings and Announcements**  
[www.sciencemeetings.org](http://www.sciencemeetings.org)

**Postdoctoral Position  
Functional Analysis of Human Centromeres  
National Cancer Institute  
National Institutes of Health**

We are seeking candidates for a postdoctoral position currently open in the Genome Structure and Function Section within the Laboratory of Biosystems and Cancer at the National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA. The selected individual will work in a group studying human centromere/pericentromere organization and function using a novel approach that provides for the selective isolation of large chromosomal regions by TAR cloning (Transformation Associated Recombination) in yeast. The primary responsibility will be to engage in studies aimed at artificial chromosome development in mammalian cell lines (*HMG 9(11)*:1623, 2000). Preference will be given to candidates with background in molecular biology and tissue culture but outstanding individuals from other areas of biology are encouraged to apply.

Candidates must hold a doctoral level degree (M.D. and/or Ph.D.). In addition, candidates must be either a U.S. citizen, a citizen of a treaty-allied country, or a nonresident alien with a valid work visa or be able to obtain a valid work visa.

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



**Dr. Tom Ebersole  
National Cancer Institute  
National Institutes of Health  
Bldg 49, Room 4A56  
9000 Rockville Pike  
Bethesda, MD 20892  
Ebersolt@mail.nih.gov**

*NCI is an Equal Opportunity Employer.*



**Chief, Molecular Targets and Cancer Branch  
Center for Cancer Research  
National Cancer Institute  
National Institutes of Health**

The Center for Cancer Research, National Cancer Institute invites applications for the position of Chief of the newly formed Molecular Targets and Cancer Branch. The Branch will encompass a group of principal investigators focused on the development of novel therapeutics and endpoints in medical oncology. Candidates should have an M.D. or Ph.D. degree and be recognized for excellence in cancer research. The successful candidate will be committed to developing a world class program that applies scientific knowledge of cancer biology to clinical protocols in cancer treatment.

U.S. citizenship or resident alien status is required. Applicants should send curriculum vitae, a statement of the candidate's research program, and six letters of recommendation to:

**Lee Helman, M.D.  
Deputy Director  
Center for Cancer Research  
National Cancer Institute  
31 Center Drive MSC 2440  
Building 31, Room 3A11  
Bethesda, Maryland 20892-2440**

Applications must be postmarked by July 16, 2001.

*NIH is an Equal Opportunity Employer.*



**Invitrogen Life Technologies** is a global leader in developing, manufacturing and marketing research tools, kits, and research products and services to biotechnology and biopharmaceutical researchers and companies. It's time for you to allow your successful career to develop with our successful company. We are currently hiring in the following areas:

- **Manufacturing**
- **Product Marketing**
- **Information Technology**
- **R&D**
- **MarCom**
- **Sales/Finance**

Invitrogen is located a bike's ride from the Pacific Ocean in Carlsbad. Our refreshing corporate culture is one of "just do it," the best combination of leadership and simplicity, with few layers of management, and fewer walls. We offer a positive, high-energy environment with modern buildings and labs, flaunting a multitude of windows welcoming the Southern California sunshine. Invitrogen has close to 3,000 people at its various worldwide locations. Our Carlsbad HQ is a family of around 350 employees in our 3 buildings.

Benefits are 100% company-paid from day one for both employees AND dependants. We offer a casual dress environment, fitness club discounts, on-site showers & lockers, and tuition reimbursement. For more information about us and the benefits and opportunities that we can provide, check out our Web site at [www.invitrogen.com](http://www.invitrogen.com), or send resume to: **1600 Faraday Ave., Carlsbad, CA 92008; Fax: (760) 602-6693. EOE M/F/D/V**

**PROVIDING TECHNOLOGY FOR THE SCIENCE OF LIFE**



The University of Tennessee–Oak Ridge National Laboratory

## Graduate School of Genome Science and Technology

The new Genome Science and Technology (GST) Graduate School is designed to focus on developments in the biological and computational sciences that stem from genome sequencing efforts. The knowledge of complete genomes is revolutionizing the biological sciences, leading to new discoveries in the health sciences and biology. GST students will be trained in emerging areas of genomics, structural biology, proteomics, computational biology/bioinformatics, and bioanalytical technologies.

GST takes advantage of the faculty, facilities, and research programs at The University of Tennessee and the Oak Ridge National Laboratory. This novel program combines an academic environment with the team-oriented approach to large research initiatives at the national laboratory. Faculty members have expertise in cutting-edge research utilizing mammalian genetics and mutagenesis, spectroscopy, high field NMR, x-ray crystallography, computational modeling, mass spectrometry, neutron scattering, and microarray technology. Various biological model systems are investigated, featuring the Oak Ridge National Laboratory Mouse Genetics Research Facility, one of the world's largest resources for studies in mouse genetics and mutagenesis for functional genomics.

*We are seeking outstanding students with backgrounds in the biological, physical or computational sciences. Graduate student stipends are \$18,000 with full tuition waiver.*

To apply, visit: <http://lsd.ornl.gov/gst/>  
**Graduate School in Genome Science and Technology**  
**Dr. Jeffrey M. Becker, Director**  
**1060 Commerce Park**  
**Oak Ridge, TN 37830-8026**  
**jbecker@utk.edu**

*UTK is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA Employer. ORNL, a multipurpose research facility managed by UT/Battelle, LLC, for the U.S. Department of Energy, is an Equal Opportunity Employer committed to building and maintaining a diverse work force.*

## FRED HUTCHINSON CANCER RESEARCH CENTER JUNIOR FACULTY POSITION

The Division of Human Biology at the Fred Hutchinson Cancer Research Center is soliciting applications to fill an open junior faculty position in the areas of genomics and human genetics. Applicants with outstanding accomplishments, particularly in the areas of complex disease-gene mapping, population genetics, large scale approaches to functional genomics, proteomics, or bioinformatics are encouraged to apply. The Human Biology Division fosters interdisciplinary, collaborative research at the interfaces of basic, clinical, and population sciences to further our understanding of human biology, cancer, and other complex human disorders. The Division occupies state-of-the-art research laboratories on a new lakeside campus. The Center offers outstanding shared resources, including DNA array and sequencing facilities. The Center has active graduate-student and postdoctoral training programs and offers exceptional opportunities for scientific interactions with other investigators in the Seattle area. Additional information about the Division can be found at [http://www.fhcr.org/science/human\\_biology/](http://www.fhcr.org/science/human_biology/)

Candidates should send a curriculum vitae, a concise statement of research plans, and three letters of reference to: **Human Biology Faculty Search Committee, Fred Hutchinson Cancer Research Center, Division of Human Biology, Mailstop: C3-168, 1100 Fairview Avenue North, P.O. Box 19024, Seattle WA 98109-1024.** The application deadline is September 30, 2001.

*The Fred Hutchinson Cancer Research Center is an Equal Opportunity Employer committed to work-force diversity. Applications from female and minority candidates are strongly encouraged.*

## POSITIONS OPEN

### POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS

Available immediately in area of genetic engineering of animals (including conditional knockouts, regulated transgenics, and knock-ins) to elucidate GABA<sub>A</sub> receptor function. Applications considered until position(s) filled. Submit curriculum vitae and three letters of reference to: **Professor Gregg E. Homanics, University of Pittsburgh School of Medicine, 200 Lothrop Street, W1356 Biomedical Science Tower, Pittsburgh, PA 15213.** E-mail: [homanicsge@anes.upmc.edu](mailto:homanicsge@anes.upmc.edu). *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATE The University of Chicago

Two positions are available to study the prion protein and its role in neurodegeneration. Projects focus on the molecular determinants of conformation, aggregation, and their association with targeted neuron death. A strong background in cell and molecular biology is required for one position, while expertise in protein chemistry and structural analysis is preferable for a second position. Please mail curriculum vitae and three references to: **Jim Mastrianni, M.D., Ph.D., Department of Neurology, MC2030, The University of Chicago, Chicago, IL 60627.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available. Metabolic regulation and improvement of plant lipid metabolism. Candidate must have a Ph.D. in biochemistry, molecular biology, breeding/genetics, plant science, or related discipline and demonstrated productivity. Plant Biochemistry and Genetics group, University of Kentucky. Contact: **David Hildebrand, N106 AGN, University of Kentucky, Lexington, KY 40546.** E-mail: [dhild@pop.uky.edu](mailto:dhild@pop.uky.edu). *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN



## BIOARRAY SOLUTIONS

### VICE PRESIDENT OF RESEARCH AND DEVELOPMENT

BioArray Solutions (website: [www.BioArray-S.com](http://www.BioArray-S.com)) is looking for a Vice President to lead a team of Molecular Biologists and Chemists in the application of the company's novel programmable bead array technology to DNA, protein, and cellular analysis.

The successful candidate will expand and direct the internal research and development organization, manage external collaborations, and contribute to strategic planning; he/she should combine demonstrated technical excellence with a proven track record of research and development management within molecular diagnostics or related area. Ph.D. or equivalent in the life sciences and minimum of 10 years of experience.

An attractive compensation package will include competitive salary, benefits, and options commensurate with background and experience. Send materials to e-mail: [jobs@bioarrays.com](mailto:jobs@bioarrays.com) or Telephone: 732-457-8888.

### MEDICAL SCHOOL FACULTY POSITIONS

The American University of the Caribbean School of Medicine is expanding the faculty and inviting applications for positions in the departments of Pathology, Anatomy, Biochemistry, Microbiology, Pharmacology, and Psychology. Successful candidates should be experienced in their field, self-motivated, and enthusiastic about teaching and scholarly activities. These positions are located at our St. Maarten Caribbean campus; website: [www.aucm.edu](http://www.aucm.edu). Candidates should send their résumés to: **Search Committee, c/o MEIO-S, 901 Ponce de Leon Boulevard, Number 401, Coral Gables, FL 33134.** FAX: 305-444-6791.

## POSITIONS OPEN

An **ASSOCIATE RESEARCH SCIENTIST POSITION** is available immediately to study the molecular and biochemical aspects of nucleotide and phosphatidylinositol phosphate binding to inwardly rectifying potassium channels. Applicants should have a Ph.D. in physiology or molecular biology with an emphasis in molecular physiology, pharmacology, and biochemistry of ion channels. Send curriculum vitae, a description of research experience, and three letters of reference to: **Dr. Steven C. Hebert, Department of Cellular and Molecular Physiology, Yale University, 333 Cedar Street, New Haven, CT 06520-8026.** *Yale University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH SCIENTIST** position available immediately to study the molecular mechanisms responsible for the cross-talk between the CD40 and IL-4 signaling pathways in B cell activation and differentiation. A Ph.D. and/or M.D. degree with a strong background in molecular biology and biochemistry is required. Send curriculum vitae and names of three references to: **Dr. Alessandra Pernis, Department of Medicine, Columbia University, 630 West 168th Street, New York, NY 10032.** FAX: 212-305-4478; e-mail: [abp1@columbia.edu](mailto:abp1@columbia.edu). *We are an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS

Available immediately to determine structures and dynamics of neuronal membrane proteins and the mechanisms of drug action. Prior training in either NMR or computational biology desirable. Applications considered until position(s) filled. Submit curriculum vitae and three letters of reference to: **Professor Yan Xu, University of Pittsburgh School of Medicine, W1358 Biomedical Science Tower, 200 Lothrop Street, Pittsburgh, PA 15213.** E-mail: [xu2@imap.pitt.edu](mailto:xu2@imap.pitt.edu). *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

## Bioinformatics Assistant Professor

The University of Texas M. D. Anderson Cancer Center, the nation's premier cancer center, is seeking an assistant professor to join our active bioinformatics group in the Department of Biostatistics. The candidate should have a Ph.D. in a computational science (bioinformatics, statistics, mathematics, computer science, or physics). Working knowledge of molecular biology, genomics, proteomics, experience analyzing microarray data or SAGE data would be a plus. Must be willing to combine an active research program in bioinformatics and biostatistics with collaborative ventures with biologists and clinicians. Please send curriculum vitae, a brief summary of research experience, and names and contact information for three references to: **Kevin Coombes, Ph.D., The University of Texas M. D. Anderson Cancer Center, Department of Biostatistics, Box 447, 1515 Holcombe Boulevard, Houston, TX 77030-4009.**

THE UNIVERSITY OF TEXAS  
MD ANDERSON  
CANCER CENTER  
*Making Cancer History™*

The University of Texas M. D. Anderson Cancer Center values diversity in its broadest sense. Diversity works at M. D. Anderson.  
EEO/AA Smoke-free environment.

## Biotechnology

## Best in your field? We're looking for the cream of the crop!



**Torrey Mesa Research Institute**, (formerly Novartis Agricultural Discovery Institute, Inc.), a research institute of Syngenta Research & Technology, is one of the largest single, fully-funded research endeavors dedicated to applying post-genomic technologies to areas of consumer health and agriculture. As an innovative and team-oriented company, we develop and apply cutting edge biotechnology for product development in nutrition, human health and crop production. We are seeking the following qualified individuals:

### Bioinformatics/Computational Biologist

We are seeking a highly motivated individual to join the TMRI Consumer Health section and develop novel tools for complex data-set analysis, integrate genomic databases (microarrays, proteomics, metabolite profiling) and apply information to problems in human and animal health. We are especially interested in individuals who have worked on problems in systems biology (the modeling and simulation of cellular networks and regulatory processes) or biostatistics (the analysis of gene and protein expression patterns). Qualifications include a BS/MS or equivalent in Computer Science or related fields with a minimum of 2 years demonstrated experience using Java, Perl and relational databases (Oracle preferred). Ability to work in a team environment, excellent communication skills, both written and verbal is required as well as excellent knowledge of Bioinformatics tools and data. **Job Code: CB/KKAM-SCI**

### Staff Scientist, Discovery Biology

A challenging position is available at the interface of pharmaceuticals, nutrition and plant science. This highly motivated scientist will help develop a research program focused on plant-based solutions for problems of human health in the Company's Consumer Health section. Ph.D. or M.D., with 2-5 years' relevant postdoctoral experience or equivalent required. The successful candidate will have independent research experience with a track record of publications in areas of biomedical science, excellent interpersonal and written communication skills and the ability to identify research priorities and opportunities. Experience in modern screening methods for therapeutic activities is preferred. A strong emphasis is placed on creative, interdisciplinary approaches to dealing with molecular mechanisms of human disease. **Job Code: SS/KKAM-SCI**

TMRI offers excellent compensation and a great benefits package, including 401(k) with match and immediate vesting. For confidential consideration, please send cover letter indicating position of interest and resume including salary history and expectations to: **Torrey Mesa Research Institute, Attn: HR/Job Code, 3115 Merryfield Row, San Diego, CA 92121-1102. Fax: (858) 812-1096. EOE**

**syngenta**

[www.tMRI.org](http://www.tMRI.org)

## Ph.D. & BS/MS Openings in Bioinformatics



The Procter & Gamble Company has two openings: a Ph.D. and a BS/MS, in bioinformatics, located at P&G's new state-of-the-art Health Care Research Center in Cincinnati, Ohio.



If you meet the qualifications for these positions, please apply online at [www.pg.com/jobs/](http://www.pg.com/jobs/) apply now and reference ad code **NAUSR001032** for Ph.D. opening and **NAUSR001080** for BS opening.

No agency referrals, please. Applicants must be currently living in North America and authorized to work in the U.S. permanently. An Equal Opportunity Employer

### Your Qualifications

A Ph.D. or a BS/MS degree in bioinformatics, molecular biology/biochemistry or computer science is required. Background in molecular biology, computational and mathematical skills, and experience in using computational tools to analyze gene expression data is necessary. Applicants should have user-level experience with UNIX, relational databases and a scripting language.

### Your Challenges

The major responsibilities include analyzing complex gene expression studies, database management and mining, sequence analysis and pathway mapping, and visualization software maintenance to support ongoing discovery of novel genes and proteins.

### Procter & Gamble

We are a Fortune 20 company that has been consistently rated as one of the "most admired" corporations in the U.S. Our support for research and development has increased substantially in recent years, with growing emphasis being placed in expanding the Health Care area. This is evidenced by our recent construction of a world class Health Care R&D facility outside of Cincinnati, Ohio. In addition, our top-rated benefits package serves to support the company's commitment to obtain and retain the best qualified scientists.

## Postdoctoral Positions National Cancer Institute, NIH

Starting stipend range \$33,660-38,628, commensurate with experience. Candidates must have a Ph.D. and/or M.D. degree and at least one year of postdoctoral experience but less than five years of experience, and training in molecular biology, protein chemistry, immunology, and virology.

Postdoctoral positions are available for a new program on HIV and AIDS. The aim is to use molecular biology to develop novel therapeutic agents. The availability of potent anti-retroviral regimens has focused attention on the need for strategies that target HIV latency or regenerate the immune system. Current projects include immunotoxins, dominant negative mutants, and nucleic acid mimetics.

Please send curriculum vitae and the names of three references to:

**Dr. Dean Hamer**  
Laboratory of Biochemistry  
National Cancer Institute  
Building 37, Room 6002  
37 Convent Drive  
Bethesda, MD 20892-4255  
Phone: 301-402-2709  
Fax: 301-402-5565  
E-mail: [HamerD@mail.nih.gov](mailto:HamerD@mail.nih.gov)

*NIH is an Equal Opportunity Employer.*



## POSITIONS OPEN

**MOLECULAR GENETICIST:** The Departments of Poultry Science and Veterinary Pathobiology, Texas A&M University, College Station, Texas, have a **TENURE-TRACK ASSISTANT** or **ASSOCIATE PROFESSOR** position available for a broadly trained Ph.D. with an interest and demonstrated expertise in the molecular genetic analyses and improvement of poultry or its products. Although the specific area of research is open, the development of an independent research program focused on a poultry species is required. Specific impact examples include disease resistance, stress susceptibility, reproduction efficiency, growth, or product composition. The opportunity also exists for interaction with faculty groups such as the Center for Animal Biotechnology and Genomics; the Faculties of Reproductive Biology and Genetics; and the Institute of Biosciences and Technology (at the Health Science Center in Houston, Texas). Extensive core support facilities are available. Applications at the Associate Professor level must have an established research program with evidence of external research support. The successful applicant will be expected to actively participate in teaching. This position is part of a life sciences initiative which is adding 60 new faculty positions, and an attractive start-up package is also available. Come join this team for a place to apply your knowledge and have an impact. College Station is ranked as one of the best places to live in the country. Candidates should submit a letter of application, current curriculum vitae with bibliography, transcripts, statement of proposed research, statement of teaching philosophy, and three letters of reference. Review of applications will begin on August 1, 2001, and continue until a suitable applicant is identified. Questions and application materials should be directed to: **Dr. Alan R. Sams, Head of Poultry Science, 2472 TAMU, College Station, TX 77843-2472. Telephone: 979-845-1931; e-mail: asams@poultry.tamu.edu.**

*Texas A&M University is an Equal Opportunity/Affirmative Action Institution.*

**ASSISTANT/ASSOCIATE PROFESSOR:** The Department of Pediatrics, Division of Allergy/Immunology in the College of Medicine, University of South Florida, is seeking a Board certified/Board eligible allergy/immunology specialist. This is a 12-month, full-time, tenure-track position. Responsibilities include teaching resident Fellows in the allergy/immunology training program, medical students and residents, clinical research, and patient care.

Qualifications: must be licensed or eligible for licensure in the State of Florida and must have Board eligibility or certification in allergy/immunology. Candidates should have experience or interest in the care of patients with allergic or immunology diseases. Salary negotiable and appointment rank commensurate with credentials and experience.

Applications must be received by May 31, 2001. Interested physicians should forward current curriculum vitae and five letters of recommendation to: **Dr. Robert A. Good, Department of Pediatrics, Division of Allergy/Immunology, University of South Florida, All Children's Hospital, 801 Sixth Street South, St. Petersburg, FL 33701.** For disability accommodations, please contact: **Linda Callahan; Telephone: 727-892-4470; TDD: 727-892-4470** at least five working days in advance. *The University is an Equal Opportunity/Equal Access/Affirmative Action Institution. According to Florida law, applications and meetings regarding them are open to the public.*

The Department of Biology and Microbiology at the University of Wisconsin Oshkosh seeks a full-time, one-year-only **ACADEMIC STAFF LECTURER** to teach genetics lecture and laboratory, molecular biology lectures, and assist in introductory biology laboratories. Position begins September 1, 2001. Ph.D. preferred; M.S. required. Teaching experience is desirable. Send letter of application, curriculum vitae, three letters of recommendation, and transcripts to: **Chair, Department of Biology and Microbiology, University of Wisconsin Oshkosh, Oshkosh, WI 54901** by June 25, 2001. *The University of Wisconsin Oshkosh is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN



## UNIVERSITY OF MANITOBA

### DEPARTMENT OF PHYSIOLOGY FACULTY OF MEDICINE UNIVERSITY OF MANITOBA

The Department of Physiology, Faculty of Medicine, University of Manitoba invites applications for two full-time contingent faculty positions at the level of **ASSISTANT PROFESSOR** in the Institute of Cardiovascular Sciences. Applicants should have a M.D. or Ph.D. degree in any of the medical sciences with two or three years of postdoctoral experience in molecular biology, gene expression, biochemistry, physiology, or pharmacology. The candidates are expected to establish independent research programs in the areas of heart failure and/or ischemic heart disease, collaborate with other members of the Institute, and teach both undergraduate and graduate students. Salary will be commensurate with experience and qualifications. Please send your résumé and statement of research goals and arrange for three letters of reference by September 15, 2001, to:

**Dr. Naranjan Dhalla  
Institute of Cardiovascular Sciences  
St. Boniface General Hospital  
Research Centre, 351 Tache Avenue  
Winnipeg, Manitoba R2H 2A6 Canada**

*The University of Manitoba encourages applications from qualified women and men including members of visible minorities, aboriginal peoples, and persons with disabilities. In accordance with Canada immigration requirements, priority consideration will be given to Canadian citizens and permanent residents.*

### ASSISTANT/ASSOCIATE OR PROFESSOR FIRE METEOROLOGIST

The Institute of Atmospheric Sciences at the South Dakota School of Mines and Technology is seeking a Scientist at the Assistant Professor, Associate Professor, or Full Professor level with demonstrated expertise in the areas of fire meteorology and the management of wildfires. During the fire season, the person will be part of an interdisciplinary team to manage wildfires. During the academic year, the candidate will function as a faculty member within the Department of Atmospheric Sciences. The anticipated start date is July 1, 2001. Persons interested in applying should possess a Ph.D. in atmospheric sciences or a related discipline by July 2001.

Please send a letter of application, curriculum vitae, and at least three references to: **Director, Institute of Atmospheric Sciences, Attention: Fire Meteorologist Position, South Dakota School of Mines and Technology, 501 East St. Joseph Street, Rapid City, SD 57701-3995. Telephone: 605-394-2291.** For more information regarding the school and additional details about this position, visit website: [www.ias.sdsmt.edu](http://www.ias.sdsmt.edu). Applications will be reviewed beginning June 1, 2001, and will continue until the position is filled. *SDSMT is an Equal Employment Opportunity/Affirmative Action/Americans With Disabilities Act Employer and Provider.*

### ASSISTANT/ASSOCIATE PROFESSOR Cell and Molecular Biology

Required qualifications: Ph.D. or equivalent degree in a biological science or biomedical sciences, postdoctoral experience, research background in cell/molecular biology, and ability to teach in a team-taught histology and development course in the professional curriculum. Have or will have extramural funding. Salary and start-up package will be competitive. Application deadline is July 2, 2001, or until candidate is selected. Submit letter of application and résumé to: **Gary E. Wise, Ph.D., Comparative Biomedical Sciences, Louisiana State University, Reference Number 000878, Baton Rouge, LA 70803. Telephone: 225-578-9889.** *LSU is an Equal Opportunity/Equal Access Employer.*

## POSITIONS OPEN

Northwestern University Medical School and Institute for Neuroscience: The Northwestern University Medical School announces a new search for a **FULL-TIME FACULTY** appointment in the Department of Anesthesiology in downtown Chicago. Outstanding candidates employing innovative approaches to animal models of pain research are encouraged to apply. The appointee will have access to shared facilities for tissue culture, cell imaging, transgenic and knockout projects, monoclonal antibodies, gene microarrays, structural biology, and biotechnology. The Ph.D. or M.D. appointee is expected to establish an independently funded research program and participate in graduate and medical school teaching.

The recruitment is part of a growing commitment to neuroscience at Northwestern University. Additional information about neuroscience programs at Northwestern University can be found on our websites: [www.northwestern.edu/nuin](http://www.northwestern.edu/nuin) and [www.nums.nwu.edu](http://www.nums.nwu.edu).

Applicants must include the following materials: (1) current curriculum vitae and list of publications, (2) brief statement of research interests (three pages or less), and (3) three letters of reference sent on their behalf to:

**Department of Anesthesiology  
M. Christine Stock, M.D., Chair  
251 East Huron Street  
Wesley 101  
Chicago, IL 60611**

Completed applications must be received by June 30, 2001. Appointment will commence on January 1, 2002, or earlier.

*Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States. Women and minorities are especially encouraged to apply.*

### CHAIR, DEPARTMENT OF PHARMACEUTICAL SCIENCES College of Pharmacy North Dakota State University Fargo, North Dakota

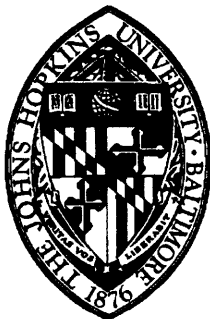
We invite inquiries, nominations, and applications for the Chair, Department of Pharmaceutical Sciences to begin on or before 1 July 2002. Screening will begin 1 September 2001 and continue until the position is filled. Candidates must possess an earned Doctorate from an accredited institution; a distinguished record of teaching, research, and service commensurate with the rank of **ASSOCIATE PROFESSOR** or **PROFESSOR** with tenure; strong leadership skills; established excellence in interpersonal, communication, and administrative skills; a strong commitment to research and graduate programs; ability to articulate the mission of the College and Department; and participation and achievement in professional organizations. Qualifications preferred but not required include experience with RO1 NIH grants or their equivalent, personnel management, budgets, faculty recruitment, and running meetings. Send nominations/applications (letter of interest, current curriculum vitae) to: **Kevin D. McCaul, Chair, Search Committee, 115D Minard Hall, NDSU, Fargo, ND 58105-5055.** For further information, please visit website: <http://www.ndsu.nodak.edu>; e-mail: [Kevin.Mccaul@ndsu.nodak.edu](mailto:Kevin.Mccaul@ndsu.nodak.edu). *NDSU is an Equal Opportunity Institution.*

### GROUP LEADER CANCER VACCINE TRIAL St Vincent's Hospital, Sydney, Australia

Applications are invited from enthusiastic Immunologists who wish to lead a novel human cancer vaccine trial. Candidates must have at least two years of postdoctoral experience in tumor immunology and established record of raising research funds, as well as a demonstrable ability to productively manage other researchers. Further information at website: <http://www.svh.stvincents.com.au/>. Inquiries: **A/Professor Robyn Ward; FAX: 61-2-92958394; e-mail: r.ward@garvan.unsw.edu.au.** Closing date: 25 June 2001.

# THE JOHNS HOPKINS UNIVERSITY BLOOMBERG SCHOOL OF PUBLIC HEALTH

## *Malaria Institute*



### TENURE TRACK FACULTY POSITIONS AVAILABLE AT ALL LEVELS

The newly established Malaria Institute in the Johns Hopkins University Bloomberg School of Public Health invites applications for tenure track faculty positions at all academic levels. Recruiting will be concentrated in the areas of:

Entomology,	Hematology,	Molecular parasitology
Population genetics,	Bioinformatics,	<i>and</i>
Molecular epidemiology,	Genomics,	Structural biology
Immunology,	Proteomics,	<i>as they pertain to malaria.</i>

Positions may be within the Department of Molecular Microbiology and Immunology, Biochemistry and Molecular Biology, Environmental Health Sciences and/or Biostatistics. Extensive core facilities will be developed and available to successful applicants. A competitive start-up package, salary, and benefits will be provided. Individuals will be expected to develop independent research programs within an interactive environment of investigators interested in the pathogenesis of microbial diseases. There will be opportunities for teaching and training of graduate students. Applicants must have a MD, PhD, or an equivalent degree and appropriate postdoctoral experience.

Send curriculum vitae, description of research interests and the names of at least 3 references by September 1, 2001 to: Diane E. Griffin, MD, PhD, Professor and Chair, Department of Molecular Microbiology and Immunology, Johns Hopkins University Bloomberg School of Public Health, Rm E5132, 615 N. Wolfe St., Baltimore, MD 21205.

The Johns Hopkins University actively encourages interest from women and minorities and is an affirmative action/equal opportunity employer.

## Empower your career.

Beckman Coulter Inc., is a leader in bioresearch and clinical instrument systems with annual sales of \$1.8 billion. Beckman Coulter's Immunomics Operations is devoted to the most exciting advances in T-cell analysis and clinical monitoring. The teaming of these two powerhouse companies has led to the development of our newest technology, MHC Tetramers. Consider the following career opportunity:

### Sr. Research Scientist

We are seeking a biochemist with expertise in methodologies to determine protein folding, structure and functions such as CD, NMR and MS. Hands-on experience with protein purification, modification and SDS-PAGE is required to direct research independently. Knowledge of non-protein alternative with basic molecular biology (PCR, sequencing, cloning) is essential. Extensive TC and some scale-up experience is preferred. Qualified candidate will possess a BS with 10+ years of related experience or a MS with 7+ years of related experience. Ph.D. with proven track record is preferred. Excellent communication, project management and research skills are essential. Flow cytometry and assay development experience is a plus.

We offer a competitive salary and comprehensive benefits package. For consideration, forward your resume with salary history to: Beckman Coulter Inc., Immunomics Operations, P.O. Box 269006, Attn: aHR, San Diego, CA, USA 92196. Email: shhr@beckman.com or Fax: 858-621-4751. EOE

[www.beckmancoulter.com](http://www.beckmancoulter.com)



## Infinite Discoveries Unparalleled Opportunities

The pharmaceutical market is rapidly changing; evolving and maturing everyday as new ways and tools are being developed to improve the quality of human life. Ideas, outstanding performance and the growth and caring of our people are at the core of our value system. Our future is in the hands of the individuals who make up our company.

### Research/Sr. Research Scientist

We are seeking a highly motivated individual interested in directing and managing research that results in identification and implementation of new assay technologies in support of discovery objectives. Essential functions include establishing laboratory work on molecular targets, demonstrated "hands-on" technical skills, and being familiar with R&D objectives, operations, and culture. Key role includes assay development, validating reagents, screening configuration and supporting characterization of pre-clinical compounds. Incumbent may supervise B.S./M.S. level scientists and have responsibility for proper laboratory conduct, data acquisition, processing, reporting, presentations, and assisting supervisor. Incumbent must demonstrate capability to publish peer reviewed scientific papers as first author and present in key professional scientific meetings. Additionally incumbent should have prior experience leading own laboratory, demonstrate initiative and pro-active behavior, have HTS experience, and/or play a prominent role on project team(s). PhD/MD/DVM or equivalent plus additional relevant experience required.

Our commitment to our employees includes an excellent salary and a comprehensive benefits package. To apply, please forward your cover letter and resume to: The DuPont Pharmaceuticals Company, CODE: LD:IK/VRF14824, Human Resources Department, PO Box 80400, Wilmington, DE 19880-0400.; E-mail: [vrresume@dupontpharma.com](mailto:vrresume@dupontpharma.com). EOE.



DuPont Pharmaceuticals Company

## POSITIONS OPEN

### ASSISTANT PROFESSOR MICROBIAL GENOMICS

The Department of Fisheries and Allied Aquacultures at Auburn University has established a priority program in aquatic genomics and is seeking candidates for an Assistant Professor, nine-month, tenure-track faculty position. Position is available immediately.

Responsibilities include development of an active, extramurally funded research program in microbial genomics focusing on pathogenic microorganisms of aquatic animals.

Minimum qualifications include a Ph.D. in microbiology, molecular biology, or a closely related field and one year of postdoctoral experience; demonstrated skills and knowledge in analysis of DNA sequences; DNA sequencing; development of PCR probes and primers; RNA manipulation; cloning and engineering of bacteria; and developing and using microarray-based genomic technology or bioinformatics. Demonstrated productivity as measured by peer-reviewed publications and demonstrated professional leadership for independent research in addition to a strong ability for collaborative research. *Proof of authorization to work in the United States must be provided.*

Candidates should submit a letter of application; curriculum vitae; transcripts; and names, telephone numbers, and e-mail addresses of four references to:

**Dr. John Liu, Search Committee Chair**  
Department of Fisheries and Allied Aquacultures  
203 Swingle Hall  
Auburn University  
Auburn, AL 36849  
Telephone: 334-844-4054  
FAX: 334-844-9208  
E-mail: [zliu@acesag.auburn.edu](mailto:zliu@acesag.auburn.edu)

Review will begin June 1, 2001, and continue until a suitable candidate is selected.

*Auburn University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

### PH.D. RESEARCHER POSITION

**ANESTHESIOLOGY RESEARCH.** The University of California, Irvine, will be recruiting during the months of April 20, 2001, to July 5, 2001, for an **ASSISTANT PROFESSOR**, tenure track. Requirements include Ph.D. or M.D. with significant research training or experience. Molecular biology experience is an asset. Opportunities for experimental and clinical research and collaborations with the basic sciences, including biomedical engineering. Present departmental research areas include gas kinetics in anesthesia during nonsteady state (NIH-funded program, HL-42637, systems to cellular physiology) and the study of mechanisms of anesthesia and memory (includes PET and MRI imaging technologies). Duties will include teaching of residents and medical students. Apply to: **Peter H. Breen, M.D., FRCPC, Vice Chair and Director of Academic Affairs, Search Committee Chair, Department of Anesthesiology, UCI Medical Center, 101 The City Drive South, Orange, CA 92668. FAX: 714-456-7702.** *UCI is an Equal Opportunity Employer committed to excellence through diversity.*

**FULL-TIME LECTURER POSITIONS** (three-year with renewal possible) are available in general biology (with an emphasis on general education and preparation for K-8 teachers) and in marine biology/marine mammalogy to begin August 23, 2001. M.S. or Ph.D. (preferred) degree in the biological sciences and postsecondary teaching experience required.

Submit letter of application; curriculum vitae; statement of teaching interests; course evaluation summaries; copies of relevant transcripts; and three letters of recommendation by July 1, 2001, to: **Dr. Laura Kingsford, Department of Biological Sciences, California State University, Long Beach, CA 90840-3702. Telephone: 562-985-4807; website: <http://www.csulb.edu/depts.biology/>.** *CSULB is an Equal Employment Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN



### PROFESSORSHIP IN COMPUTATIONAL GENOMICS

University of Idaho

We invite applications for a newly established position in computational genomics at the University of Idaho. Join our sizable, enthusiastic research group, which spans several departments and colleges, and help fulfill Idaho's commitment to enhancing this strategic research area. The University of Idaho is a comprehensive research institution in a warm college community with easy access to numerous outdoor recreational activities in the beautiful Pacific Northwest. We seek individuals at all ranks with research experience in computational analysis of genomics or proteomics.

For further information, we invite you to visit our website: [www.cs.uidaho.edu/biosearch.html](http://www.cs.uidaho.edu/biosearch.html). Please send cover letter, curriculum vitae, list of references, and any other appropriate materials to: **James A. Foster, Bioinformatics Search Committee Chair, University of Idaho, Department of Computer Science, Moscow, ID 83844-1010. E-mail: [foster@cs.uidaho.edu](mailto:foster@cs.uidaho.edu).** The position will remain open until filled, but initial screening will begin November 15, 2001.

*The University of Idaho is an Equal Opportunity/Affirmative Action Employer committed to enhancing diversity.*

The Center for Gene Research and Biotechnology will hire a **BIOCOMPUTING SUPPORT/BIOINFORMATICS** at either the Ph.D. level or the M.S./B.S./B.A. level with research experience (see website: <http://osu.orst.edu/dept/cgrb/positions.html>). This is a research and service position in an expanding bioinformatics team. Applicants with backgrounds in either a biological or computer-related field are sought.

Required qualifications include strong computer skills across a range of platforms; programming experience (e.g., PERL, C/C++, SQL) for development or application of bioinformatics/biocomputing programs; and broad familiarity with sequence analysis programs, sequence databases, and sequence data management. Database and website development experience is highly desirable. Salary will be commensurate with experience and qualifications. Send letter of interest, curriculum vitae, and names and contact information for three references to: **Dr. James Carrington, Director, Center for Gene Research and Biotechnology, Oregon State University, Corvallis, OR 97331-7303.** Review of applications will begin on July 15, 2001. *OSU is an Affirmative Action/Equal Opportunity Employer and has a policy of being responsive to the needs of dual-career couples.*

### FACULTY POSITION

The University of Texas at Austin

The Department of Physics of The University of Texas at Austin invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** starting September 2002. This is a research and teaching position. Applicants must have a Ph.D. (or equivalent) and should have a proven record of experimental research in biological physics, soft condensed matter, and/or nonlinear/non-equilibrium phenomena. The successful candidate will assume full teaching responsibilities in the Department of Physics. Prior teaching experience is desirable, and excellent English language communication skills are required. In exceptional cases a more senior appointment with tenure will be considered. Applicants should send curriculum vitae, a list of publications, a statement of research accomplishments, a research plan, and arrange for at least five letters of reference to be sent to: **Professor Roy Schwitters, Chairman, Department of Physics, The University of Texas at Austin, Austin, TX 78712-1081.** Review of completed applications will begin October 1, 2001, and will continue until the position is filled. *The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**DIRECTOR**, Texas A&M University transgenic facility. The Department of Pathobiology in collaboration with the Center for Animal Biotechnology and Genomics and the NIEHS Center for Environmental and Rural Health invites applications for a **FACULTY** or **RESEARCH SCIENTIST** position. This individual would have strong expertise in molecular construct design and production and supervise a transgenic mouse core facility to produce overexpressed and gene-ablated mice for campus investigators. He/she would provide oversight for services to isolate and characterize genes of interest, design and prepare pronuclear and homologous recombination constructs, culture and genetically manipulate embryonic stem (ES) cells, karyotype targeted ES cell lines, and perform PCR/Southern analysis for pronuclear and ES cell blastocyst microinjection in mice. A Ph.D., D.V.M./Ph.D., or M.D./Ph.D. and postdoctoral training is expected of a tenure-track individual, while an M.S. or Ph.D. degree with suitable experience will be considered for a research track position. A detailed position description is posted on the department website: <http://vtbp-www.cvm.tamu.edu/>. A letter of application with curriculum vitae, statement of research and service goals, and contact information for three references should be sent to: **Transgenic Director Search Committee, Department of Pathobiology, Texas Veterinary Medical Center, Texas A&M University, College Station, TX 77843-4467.** Applications will be received until the position is filled. *Texas A&M University is an Equal Opportunity Employer committed to excellence through diversity.*

### FACULTY POSITION IN CELL BIOLOGY

Tel Aviv University

The Department of Cell Research and Immunology invites applications for a tenure-track faculty position in the following fields: immunology and molecular biology of eukaryotic cells. The successful candidate is expected to develop an independent research program and to participate in teaching B.Sc./M.Sc./Ph.D. students.

Current research activities being conducted in our department range from cancer and virology to gene therapy, development and regulation of gene expression, and immunology. Please send curriculum vitae; list of publications; a short description of research interests and future projects; full address; and the names, addresses, and telephone numbers of three references to: **Professor M. Horowitz, Head, Department of Cell Research and Immunology, Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel. FAX: 972-3-6422046.**

### ACADEMIC POSITION ANNOUNCEMENTS

University of California, Irvine  
School of Biological Sciences

Occasional openings for nonsenate academic **PROFESSIONAL RESEARCHERS, POSTGRADUATE RESEARCHERS, SPECIALISTS, and LECTURERS** in our Departments of Developmental and Cell Biology, Ecology and Evolutionary Biology, Molecular Biology and Biochemistry, and Neurobiology and Behavior are posted on our website: <http://www.bio.uci.edu/>. Please check back often and please reference specific position number when applying.

*UCI is an Equal Opportunity Employer committed to excellence through diversity.*

**POSTDOCTORAL POSITION** at the University of Wisconsin—Madison available immediately to investigate the differentiation of human embryonic stem cells into cardiomyocytes (website: <http://www.wisc.edu/cellsignaling/positions.html>). Experience in cardiac cell biology, molecular biology, and tissue culture needed. Salary will be commensurate with experience. Please send curriculum vitae, contact information for three references, and statement of research interests to: **Timothy J. Kamp, M.D., Ph.D., H6/343 CSC, 600 Highland Avenue, Madison, WI 53711. E-mail: [tjk@medicine.wisc.edu](mailto:tjk@medicine.wisc.edu).**

small-company  
environment

big-company  
impact<sup>SM</sup>

Ortho-Clinical  
Diagnostics<sup>SM</sup>  
a Johnson & Johnson company

Michael, Biologist

Margaret, Chemist

Michael loves the organizational support he finds in his small-company environment, as well as the big-company opportunity to partner with universities and research foundations.



Margaret enjoys the innovative structure of her big company's Scientific Career Ladder, but also values her small-company environment where people are empowered to make faster decisions.



## Who says you have to choose?

At Johnson & Johnson we celebrate and promote small-company environments that nurture the needs of individuals and families. Our decentralized, adaptive organization has grown to become the world's most broadly based health care company. Through our 190 operating units in 51 countries, we're bringing real, in-depth solutions to nearly every corner of global health care.

Look deeper at the Johnson & Johnson Family of Companies.

find more  
[www.jnj.com/careers](http://www.jnj.com/careers)

©Johnson & Johnson 2001. An Equal Opportunity Employer.  
SMALL-COMPANY ENVIRONMENT/BIG-COMPANY IMPACT is a service mark of Johnson & Johnson.

Johnson & Johnson

The Molecular Diagnostics group of OCD is currently seeking a Postdoctoral Scientist and a Scientist to join the group within the R.W. Johnson PRI laboratories in La Jolla, CA. The positions are part of the newly established molecular diagnostics program. The candidates will have an opportunity to work with a range of DNA chip/bioinformatics technologies.

### Postdoctoral Scientist

In this challenging role, you will develop and implement research to validate potential molecular tumor markers generated by EST database mining and DNA chip analysis of clinical samples. Validation work will involve quantitative RT-PCR in situ-hybridization methods to determine tissue specificity and sensitivity.

To qualify, you must have a Ph.D./MD with experience in cancer genetics or cancer medicine and experience in molecular biology techniques, cell physiology knowledge in breast, colon or prostate cancers is desirable as are microscopy skills in ISH and/or IHC assays. Understanding of high throughput gene expression and genotype analysis is a plus.

### Scientist

Using a range of microdissection techniques, you will prepare human tissue samples for DNA chip analysis.

To qualify, you must have a BS/MS in Biology and experience with tissue handling including a background in cutting and mounting of fresh, frozen and paraffin embedded samples, counter staining and IHC methods. The ability to assess tissue morphology and cytology is required. Laboratory experience in cell culture and quantitative PCR is desirable.

As a valued team member, you'll receive a competitive salary and great benefits including medical/dental, a 401 (k) savings plan, a pension plan and tuition reimbursement. Please forward your resume to: Ortho-Clinical Diagnostics, Attn: Human Resources, N-22, 1001 US Highway 202, Raritan, NJ 08869.



## Scientific Curators

Professional positions are available as Scientific Curators in the expanding Mouse Genome Informatics Programs at The Jackson Laboratory working with the Mouse Genome Database, Gene Expression Database, Mouse Genome Sequence Project and the Gene Ontology Project. Successful candidates will be primarily responsible for data acquisition and analysis, evaluating and annotating data to be incorporated into the databases, integrating information from disparate sources, and interacting with research laboratories and genome centers to facilitate data transfer. In addition, Curators take part in database and interface design by contributing biological perspectives to new data content and displays. Areas of preferred expertise include mammalian or comparative genomics, molecular, cellular, or developmental biology, anatomy, sequence analysis, and biochemistry. Other desirable attributes include excellent writing/communication skills and the ability to work effectively in a team environment. Ph.D. degree in Life Sciences or M.S. with appropriate experience required.

The Jackson Laboratory is one of the world's foremost centers for mammalian genetics research. Located in Bar Harbor, Maine, the lab is adjacent to Acadia National Park. Mountains, ocean, forests, lakes, and trails are all within walking distance. If you love high tech challenges but you're looking for a more natural environment, this could be the opportunity you've been searching for. Please refer to job posting # sci/022/1T.

**Interested applicants should send cover letter and c.v. to:**  
Human Resources, The Jackson Laboratory, 600 Main Street, Bar Harbor, Maine 04609 **Phone:** (207) 288-6103 **Fax:** (207) 288-6106  
**E-mail:** [jobs@jax.org](mailto:jobs@jax.org)

The Jackson Laboratory is an equal opportunity/affirmative action employer.

<http://www.jax.org>

## nature medicine

seeks an **Assistant Editor** to join its full-time editorial group in New York City.

The position offers an exciting and challenging opportunity to enter the world of scientific publishing while remaining at the forefront of research. Members of the editorial team oversee the selection and preparation of research articles published in *Nature Medicine*; they also commission Commentaries and Reviews and write news items and editorials for the journal. They attend meetings, visit laboratories and maintain alliances with the international scientific community.

We are seeking a qualified biomedical researcher with a PhD and a broad-based interest and expertise in the areas covered in *Nature Medicine*. The ideal candidate should have postdoctoral research experience and publications in peer-reviewed journals, excellent written and oral communications skills, good standing in the community and a commitment to the communication of science. We are particularly interested in applicants with expertise in Immunology but we would welcome applications from outstanding candidates in any area of biomedical research.

Please submit a curriculum vitae, a concise cover letter explaining your interest in the post and a 600-word News & Views style article on an exciting and newsworthy recent development in any area of biomedical research, to: The Editor, *Nature Medicine*, 345 Park Avenue South, 10th Floor, New York, NY 10010-1707, Fax: (212) 683-5751, [medicine@natureny.com](mailto:medicine@natureny.com). **The deadline for applications is 15th of June 2001.**

## POSITIONS OPEN



### TENURE-TRACK FACULTY POSITION EXPERIMENTAL PHYSICS Dartmouth College

The Department of Physics and Astronomy at Dartmouth College invites applications for a tenure-track faculty position in condensed matter/materials or biophysics at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. The successful candidate will complement active groups in the areas of nanostructures, optical spectroscopy, and biophysics. Potential interactions with other faculty in molecular materials, engineering, chemistry, biology, and the medical school will be viewed favorably.

Applicants should submit curriculum vitae including a full list of publications, statements of research and teaching interests, and a list of at least four references to the following address: **Faculty Search, Attention: CM/Bio, Department of Physics and Astronomy, Dartmouth College, 6127 Wilder Laboratory, Hanover, NH 03755-3528 U.S.A.**

Consideration of applicants will begin in August 2001 and will continue until the position is filled. Dartmouth College is an Equal Opportunity and Affirmative Action Employer. We encourage applications from women and minority scientists.

### THE OHIO STATE UNIVERSITY

The Division of Pharmaceutics invites applications for an **ASSISTANT PROFESSOR** position with preference given to applicants with research interests in molecular and biological approaches. The Division consists of nine faculty and 45 Doctoral students with research focus in drug delivery and pharmacokinetics-pharmacodynamics (website: <http://topol.pharmacy.ohio-state.edu>).

Ohio State is a comprehensive research university that offers an excellent research environment for basic and clinical sciences. The College of Pharmacy has state-of-the-art research and library facilities. The College is part of a medical center complex that includes a cancer hospital and research institute, a comprehensive cancer center, a heart and lung research institute, and a retrovirus center. Other shared university facilities include a supercomputer center and a chemical instrumentation center.

A letter of application along with curriculum vitae, the names and addresses of three references, and a statement of research interests and professional goals should be sent to:

**William L. Hayton, Chair  
Division of Pharmaceutics  
College of Pharmacy  
The Ohio State University  
500 West 12th Avenue  
Columbus, OH 43210-1291  
Telephone: 614-292-1288  
E-mail: hayton.1@osu.edu**

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

**POSTDOCTORAL POSITIONS** available immediately to study the molecular genetics of human gynecologic and breast cancers. Candidates must have a Doctoral degree and a strong background in basic techniques of cell and molecular biology and molecular genetics such as cell culture, molecular cloning, PCR, sequencing, and mutation analysis. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Jeff Boyd, Department of Surgery, Box 201, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** MSKCC is an Equal Opportunity Employer.

## POSITIONS OPEN

### FACULTY POSITIONS Department of Pharmacological and Pharmaceutical Sciences University of Houston College of Pharmacy

Candidates are invited to apply for several tenure-track positions at the rank of **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** in the Department of Pharmacological and Pharmaceutical Sciences at the University of Houston College of Pharmacy. Applicants must have an earned Doctorate degree (Ph.D., M.D., or Pharm.D.), and postdoctoral research experience. Rank and salary will be commensurate with experience. Individuals with a strong research background in cellular and molecular approaches to drug action, drug delivery, or related areas are encouraged to apply. Research areas in the Department include novel drug delivery, cardiovascular and neuropharmacology, signal transduction, and regulation of membrane transport proteins and receptors. Successful candidates will be expected to develop and/or maintain a strong, extramurally funded research program and to participate in professional and graduate teaching. Candidates should submit curriculum vitae, summary of research interest, and the names of three references to: **Dr. Doug Eikenburg, Chair, Department of Pharmacological and Pharmaceutical Sciences, College of Pharmacy, 521 SR2 Building, University of Houston, Houston, TX 77204-5037. E-mail: deikenburg@uh.edu.** See our website: <http://www.uh.edu/pharmacy/graduate.html>. The University of Houston is an Equal Opportunity/Affirmative Action Employer. Minorities, women, veterans, and persons with disabilities are especially encouraged to apply.

### NIH POSTDOCTORAL FELLOWSHIPS

Enter a new career in endocrine, developmental, and reproductive toxicology. No experience in toxicology required. Available immediately at the University of Illinois at Urbana-Champaign, a world-class research university with state-of-the-art research facilities. The toxicology program is well established and provides broad-based training leading to careers in academia, pharmaceutical/biotechnological industries, and governmental agencies. Candidates should have a Ph.D., M.D., D.V.M., or equivalent. *U.S. citizens or permanent residents only.* For information, see website: [www.cvm.uiuc.edu/vb/nihtox](http://www.cvm.uiuc.edu/vb/nihtox) or call **Dr. Rex Hess; Telephone: 217-265-0712; e-mail: r-hess@uiuc.edu.** The University of Illinois is an Equal Opportunity Employer and minorities are encouraged to apply.

**POSTDOCTORAL RESEARCH** in neural repair: We are seeking a highly motivated person to obtain interdisciplinary research experience in the molecular and cellular mechanisms of neural repair after brain injury and the role of stem cells in CNS recovery. Candidates should have an M.D., Ph.D., or equivalent and be permanent residents or American citizens. Please send a brief description of research experience, curriculum vitae, and names of references to: **Dr. Harley Kornblum, Department of Molecular Pharmacology, UCLA School of Medicine, Room 1246 JLNMR, 700 Westwood Boulevard, Los Angeles, CA 90095. E-mail: hkornblum@mednet.ucla.edu.**

Several **POSTDOCTORAL POSITIONS** available to study the molecular mechanism(s) involved in epidermal growth factor signaling and regulation of adenylyl cyclase (see *Science* 283:1328, 1999; *J. Biol. Chem.* 274:14067, 1999; *ibid.* 275:25915, 2000). Studies involve mutagenesis of signaling elements, genetic screening, expression, purification of recombinant proteins, and *in vitro* reconstitution of signaling. Applicants must have a recent Ph.D. and experience in biochemical and/or molecular techniques. Send curriculum vitae and names of three references to: **Dr. Tarun B. Patel, Department of Pharmacology, University of Tennessee Memphis, 874 Union Avenue, Memphis, TN 38163. E-mail: tpatel@utmem.edu.** UT Memphis is an Equal Employment Opportunity/Affirmative Action/Title VII/Title IX/Section 504/Americans With Disabilities Act Employer.

## POSITIONS OPEN



### TENURE-TRACK POSITION Hebrew University of Jerusalem Faculty of Dental Medicine

The Institute of Dental Sciences of the Faculty of Dental Medicine calls for applications for a tenure-track position that will be available starting October 2001. Ph.D. or Ph.D.-D.M.D. degrees and postdoctoral training are required. Excellence in research and teaching experience in craniofacial biology are of prime importance to the Search Committee. Candidates are expected to develop independent research and take part in teaching commitments in one of the following fields: developmental biology, aging (with preference given to Molecular Geneticists), infectious and neoplastic diseases of the oral cavity, gene therapy, tissue engineering, and biotechnology of bone and oral tissues.

Applications including curriculum vitae; list of publications; three to five selected reprints; outline of future research; and three letters of recommendation should be sent to Dean's office by July 31, 2001. The position holder will be affiliated with the Department of Oral Biology in the Institute of Dental Sciences. **Faculty of Dental Medicine, The Hebrew University-Hadassah School of Dental Medicine, P.O.B. 12272, 91120 Jerusalem, Israel. Website: <http://dental.huji.ac.il>.**

### BIOINFORMATICS FACULTY POSITION University of Utah Health Sciences Center Department of Medical Informatics

The University of Utah seeks **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** tenure-track faculty in bioinformatics. The faculty appointment will be in the Department of Medical Informatics with a possible joint appointment in other appropriate academic departments (human genetics, computer science, pharmacy, biology). The Medical Informatics Department is internationally known as a leader in the application of information technology in medicine and is leading efforts at the University of Utah to establish this same level of excellence in the field of bioinformatics. The candidate will be involved in bringing together a number of diverse academic departments to provide graduate-level training in bioinformatics.

Candidates should demonstrate the ability to conduct a vigorous research program as well as teach. If you are a faculty candidate with a research focus in bioinformatics, computational biology, genomics, functional genomics, or proteomics, please respond.

Send curriculum vitae, statement of research and career plans, and three letters of reference to:

**Reed M. Gardner, Ph.D.  
Medical Informatics  
50 North Medical Drive, AB193 SOM  
Salt Lake City, UT 84132  
E-mail: reed.gardner@hsc.utah.edu**

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

The Thomas E. Starzl Transplantation Institute and the Department of Surgery, University of Pittsburgh, seek a **POSTDOCTORAL FELLOW** in the area of molecular biology. Responsibilities of the qualified candidate will include recombinant DNA technology, sequencing, mammalian cell culture systems, and immunohistochemistry. The qualified applicant must hold an M.D., Ph.D., or an equivalent degree with extensive experience in mammalian molecular genetics, biochemistry, and immunology. Individuals with experience in genomic research of large animals or homologous recombination will be given special consideration. Position available immediately. Please send curriculum vitae and names of three references to: **Faculty Manager, Thomas E. Starzl Transplantation Institute, University of Pittsburgh, 4 Falk Medical Building, 3601 Fifth Avenue, Pittsburgh, PA 15213. FAX: 412-647-5480; e-mail: dudichhh@msx.upmc.edu.**

**Genomica Corporation**, located in Boulder, Colorado, is a provider of leading software products used in discovering the human genome, one of the hottest industry sectors on Wall Street. We recently completed our IPO and are experiencing significant growth. Candidates interested in the following positions should email resume to [resumes@genomica.com](mailto:resumes@genomica.com). For complete job descriptions, visit [www.genomica.com](http://www.genomica.com).

### *Computational Protein Scientist*

Candidates must have a Ph.D. in Biochemistry or related areas and several years of experience working with protein classification, proteomics and three-dimensional analysis. Will be expected to publish original research and build a diverse group of protein scientists targeted at designing a variety of protein analysis software tools and providing help in aggregating protein information over the Internet.

### *Molecular Biologist/Sequence Analysis Expert*

We seek a molecular biologist with significant experience in DNA and protein sequence analysis to lead the company's efforts in software development. Must have experience in sequencing and analyzing DNA and derived sequences and in using at least one of the commercial packages (e.g. GCG) to perform detailed sequence analyses. Will be encouraged to publish and present original scientific results. A Ph.D. in molecular biology or related field is required.

### *Quantitative/Statistical Geneticist*

Do you have significant experience in the analysis of human genetic disorders? Our ideal candidate will be well versed in both the theory and practice of genetic analysis and will be a

part of a team that develops new methods and software for genetic analysis. The successful candidate will also be responsible for collaborations with academic and industrial partners in the analysis of genetic disorders. A Ph. D. in statistical genetics or a related field is required.

### *Clinical Geneticist*

If you have a background in clinical genetics and are interested in the development of novel computer approaches to clinical genetics, you could be the Clinical Geneticist we're looking for. Must be facile with the use of computers. Will be a member of a team that is involved in the development of new methods and software in the analysis of genetic disorders. An M.D. or Ph.D. in clinical genetics or a related field is required.

### *Application Scientist*

Our Application Scientist will be responsible for seven areas: 1) services to sales, 2) leveraged marketing and sales activities, 3) post-sales support, 4) product development, 5) professional services, 6) business development, and 7) scientific activities. The Scientist will be a member of the Company biology team, and will author papers and articles for publication in trade magazines and journals. A Ph.D. is preferred, though a BA/BS/MS in life sciences with 5+ years relevant research experience and a high degree of computer literacy is acceptable.

**GENOMICA™**  
*Genetic variation matters.™*

Copyright ©2001 Genomica Corporation. All rights reserved. The Genomica logo and "Genetic variation matters" are trademarks of Genomica Corporation in the U.S. and other countries.

## Tenure Track Investigator

The National Institute on Aging (NIA), Intramural Research Program, Laboratory of Clinical Investigation is recruiting a Tenure Track Investigator to develop an independent research program in the area of neurodegenerative disease. Candidates should have an MD or MD/PhD with at least 3 years post doc experience and an exceptional publication record. It is desired that the candidate may be a neurologist, psychiatrist, or other related medical specialty and have experience in patient-oriented neurodegenerative disease research with a focus on Alzheimer's disease. As new therapeutic targets are identified, the individual should have appropriate training and experience to exploit them with the development of strategies for clinical exploration of the target. Interested candidates should send curriculum vitae and bibliography, two-page statement of research interests, and three letters of recommendation. Send to LCI/Search Comm. Chair c/o Pat Boyce, Rm 1D09, Box 26, Human Resources Office, National Institute on Aging, Gerontology Research Center, 5600 Nathan Shock Drive, Baltimore, MD 21224-6825. State Announcement # NIA-01-008(GRC) on address. Applications must be received by August 1, 2001.



**NIA is an Equal Opportunity Employer**

### Staff Scientist & Postdoctoral Fellow Developmental Neurobiology National Heart Lung and Blood Institute National Institutes of Health, Bethesda, MD

The National Heart, Lung and Blood Institute (NHLBI), Division of Intramural Research seeks to hire a Staff Scientist and Postdoctoral Fellow to work in a new laboratory at NHLBI. The goal of the lab is to investigate neural/glia interactions in influencing development and regeneration of the mammalian central nervous system. Potential research includes genomic and proteomic approaches to astrocyte function, understanding the signals involved in regulating the production of the astrocyte extracellular matrix and investigating growth cone signaling in directed neuronal migration and axonal pathfinding in response to glial-derived cues. The experiments can take advantage of all modern cell and molecular biological techniques, including transgenic animals and techniques of gene delivery to influence gene expression in neurons and glia. The analytical tools may include cell culture and whole animal studies, including live cell imaging and standard molecular and cellular biological techniques, as well as gene and protein expression profiling.

Both positions require an M.D or Ph.D. The Staff Scientist position requires postdoctoral experience with extensive experience in molecular biological or biochemical techniques as well as a strong record of publication. The Postdoctoral position requires research experience in any area related to neuronal development or regeneration, with a record of publication in peer-reviewed journals. The successful candidates will be offered a competitive salary based on experience and benefits under Title 42. Scientific inquiries can be directed to Dr. Herbert M. Geller ([gellerh@nhlbi.nih.gov](mailto:gellerh@nhlbi.nih.gov)). Please submit by closing date of **July 6, 2001** a curriculum vitae and a brief statement of research interest along with names, postal and e-mail addresses of at least three references to:

**Ms. Kim Westervelt, Personnel Office,  
National Heart, Lung and Blood Institute  
31 Center Drive, MSC 2484, Building 31, Room 5A28  
Bethesda, MD 20892-2484  
[Westervk@nhlbi.nih.gov](mailto:Westervk@nhlbi.nih.gov)**

Please include vacancy identifier HL-01-0054 on ALL correspondence for the Staff Scientist position and vacancy identifier HL-01-0055 on ALL correspondence for the Postdoctoral Fellow position.

**NIH is an Equal Opportunity Employer**



## POSITIONS OPEN

### RESEARCH SCIENTIST VICAL, INC.

Vical, The Naked DNA Company®, is rapidly growing in anticipation of the launch of our first product and the expansion of product applications leveraging our patented nonviral gene delivery technology. We are looking for well-organized individual with strong instrument and laboratory troubleshooting and analytical skills to characterize the immunology of plasmid DNA vaccination. You will develop DNA vaccines that elicit B, Th1, Th2, and/or CTL-based immune responses and use mouse models of DNA immunization and protection. Requires more than three years of experience, a Ph.D. in immunology, and proficiency in basic cellular immunology techniques such as ELISA, ELISPOT, CTL, FACS, and lymphocyte proliferation assays. A basic understanding of the biology of humoral, cellular, and mucosal immune responses is necessary along with detailed knowledge of antigen processing, presentation, and cognate recognition. For consideration, please send your résumé to: **Vical Inc., Human Resources, 9373 Towne Centre Drive, Suite 100, San Diego, CA 92121. FAX: 858-646-1150; e-mail: cgoodall@vical.com. Equal Opportunity Employer.**

### MRI SCIENTIST

The NIH MRI Research Facility (NMRF) and the Mouse Imaging Facility (MIF) in the National Institute of Neurological Disorders and Stroke offers state-of-the-art MRI for users throughout NIH. NMRF and MIF are seeking an MRI Scientist to perform MRI and MRS experiments on mice in collaboration with the NIH user base. MR equipment for mouse imaging consists of a 300 MHz widebore microimaging system and a 7T 21cm system. In addition, there is a 4.7T 40cm MRI system. The successful candidate will have Ph.D. and postdoctoral experience in developing MR techniques, preferably for use in mice. Experience in pulse programming, construction of RF probes, and developing software for analysis of MR data is highly desirable. Salary is very competitive and commensurate with experience. The full vacancy announcement with application requirements and procedures is available via **website: <http://careerhere.nih.gov>** referencing NINDS. Applications are due by June 30, 2001. For questions, call **Telephone: 301-435-5499. NIH is an Equal Opportunity Employer.**

**RESEARCH ASSISTANT III** for Ohio University. Duties: research in laboratory concentrating on the molecular basis of hormone action in cells and tissues and the role of hormones in skeletal, cardiovascular, and immune function and associated diseases. Isolate and characterize proteins responsible for mediating these effects in cells using variety of histological and biochemical methodologies, immunofluorescence, and *in situ* hybridization. Use mouse as experimental model for isolating genomic DNA, isolating RNA, reverse transcriptase-polymerase chain reactions (RT-PCR), and immunoblotting of DNA and RNA using techniques of Southern and Northern blotting. Purify specific single- and double-stranded DNA using microarray technology. Requires M.S. in biochemistry. No experience required. Forty hours per week; 8 a.m. to 5 p.m., Monday through Friday. Pay: \$33,000 per year. Send two résumés and cover letters (no telephone calls) to: **Reference Number 7819JED, P.O. Box 16808, Columbus, OH 43216.**

### IMMUNOLOGIST Reduction of Protein Allergenicity

The Protein Screening Department of Novozymes A/S, Denmark, seeks an Immunologist to join a project group that focuses on reducing allergenic potential of enzymes and other proteins. You will be part of a team that develops a suite of technologies that serve to analyze the structure for a protein of interest to find the major immunogenic epitopes, modify these epitopes through protein engineering and molecular evolution, and select the improved versions by novel assay techniques. Read more about the position at **website: [www.novozymes.com/job](http://www.novozymes.com/job)**.

## POSITIONS OPEN

### FLOW CYTOMETRY OPERATOR NEEDED

We are looking for a part-time or full-time Flow Cytometer Operator to run the Flow Cytometry Core in the Immunobiology Laboratory at the Massachusetts General Hospital in the beautiful Charlestown Navy Yard facility (on the Boston waterfront). Primary duties will include (1) operation and maintenance of an Epics Elite Flow Cytometer, (2) conduct laboratory experiments that use FACS technology, and (3) provide education to users in preparation and execution of experiments. The applicant must be a self-starter, motivated, ambitious, and organized. Experience with the performance and operation of an Epics Elite Flow Cytometer machine preferred, but training and use of equipment and computer software will be provided. This individual should be able to perform careful laboratory techniques with strict attention to detail, possess good communication and interpersonal skills, and have a strong knowledge of computer software. A B.S., M.D., or Ph.D. degree required.

Please send résumé to: **Dr. Denise Faustman, Immunobiology Laboratory, Massachusetts General Hospital-East, Building 149, 13th Street, CNY-3601, Charlestown, MA 02129.**

### RESEARCH INVESTIGATOR

International biomedical reproductive health research organization is immediately seeking a professional to execute mechanistic and pharmacological studies of selected compounds for male and female contraception. The Investigator will conduct pharmacological studies of selected synthetic steroidal and nonsteroidal compounds and use *in vivo* and *in vitro* methods to study the mechanism of action on the target tissues. Additional responsibilities will be to assist in the development and management of radioimmunoassays of compounds under investigation. Requires Ph.D. in the biological sciences and three years of postdoctoral experience in reproductive biology, demonstrated skill in laboratory research, and proficiency in overseeing the work of laboratory technicians. Experience with molecular biology and tissue culture techniques highly desirable. Please send curriculum vitae and cover letter to: **K. Bailey, Human Resources Specialist, Population Council, CBR-RI, 1230 York Avenue, New York, NY 10021. FAX: 212-327-7678; e-mail: [kbailey@popcouncil.org](mailto:kbailey@popcouncil.org). Affirmative Action/Equal Opportunity Employer/Minorities/Females.**

### PH.D. TISSUE CULTURE SPECIALIST with Industry Experience

Precision Therapeutics, Inc., a cell culture-based clinical laboratory located in Pittsburgh, Pennsylvania, is seeking a Ph.D. Scientist with experience in primary cell culture for the optimization of tumor cell growth and the acceleration of sample throughput. This position also requires routine assessment and evaluation of clinical primary human tumor cell cultures. Excellent organizational and project management skills and familiarity with clinical laboratory and industrial regulatory standards are essential. Please FAX your curriculum vitae to: **Human Resources/LE, Precision Therapeutics, Inc.; Telephone: 800-868-9517; e-mail: [Leaton@ptilabs.com](mailto:Leaton@ptilabs.com)**. No telephone calls, please.

### STAFF SCIENTISTS

Responsible for the development and implementation of approaches and strategies including chromatographic and electrophoretic separation methods, mass spectrometry, biophysical analysis, and carbohydrate analysis for the characterization and analysis of recombinant protein therapeutics. Work in project-focused environment leading the protein characterization and analysis team and closely interacting with members from other departments. Supervise junior-level Scientists. Ph.D. in chemistry and three years of experience as a Researcher.

Respond to: **Genetics Institute, Inc., 87 Cambridge Park Drive, Cambridge, MA 02140, Attention: LP. An Equal Opportunity Employer.**

## POSITIONS OPEN

### SENIOR SCIENTIST BIOPRINT

We are currently seeking an individual to join our company as a Senior Scientist. This Senior Scientist position will play a leadership role in joining an exciting team developing a next-generation tool for predictive analysis of *in vivo* and *in vitro* pharmaceutical drug properties from calculated molecular descriptors. The Company's informatics projects generate large, high-quality data sets specifically for model development. Modeling efforts focus on relationships between molecular features, *in vitro* biological activity, and *in vivo* biological effects. The primary responsibilities of this position will include directing research strategy (modeling and data gathering) and developing predictive models from large *in vitro* and *in vivo* data sets. This position will also involve management of Biologists, Chemists, Pharmacologists, statisticians, and software developers. Participation in key corporate collaborations is also expected.

Preference will be given to candidates with a Ph.D. in chemistry and a successful track record in drug discovery or lead optimization. Special consideration will be given to candidates with in-depth understanding of the relationships between *in vitro* and *in vivo* models. Excellent management and communication skills as well as exceptional analytical skills, a high degree of self-motivation, and ability to work as a proactive team member are required.

Cerep offers a competitive total compensation package as well as a dynamic and collegial work environment. Please send your confidential cover letter and curriculum vitae with salary requirements to the following e-mail address: **[n.legresley@cerep.com](mailto:n.legresley@cerep.com)**. To learn more about Cerep, please visit our website: **<http://www.cerep.com>**.

*Cerep is an Equal Opportunity Employer.*

Multiple positions are available to participate in building of a comprehensive phenotyping program at Xenogen Biosciences.

**PH.D. SCIENTISTS:** must have strong background in mouse biology and genetics. Need strong drive and well-developed communication and organizational skills. Advanced knowledge of statistics is a plus. Must have expertise and hands-on experience in either obesity/diabetes or cardiovascular physiology. **M.S./B.S. RESEARCH ASSOCIATES:** must have at least two years of hands-on experience with mice. Need practical knowledge of murine surgery and/or procedures. Computer literacy is a plus.

In addition, Xenogen Biosciences is currently seeking an individual to fill a permanent **RESEARCH ASSOCIATE** position in its transgenic core microinjection facility. The successful candidate should have at least three years of experience producing genetically modified mice by pronuclear injection of DNA solutions and ES cell injections into blastocysts. Tissue culture and embryo/sperm cryopreservation experience is desirable. A B.S. or B.A. degree in a related scientific discipline or an M.A./M.S. is a plus. Please FAX résumés to: **Human Resources Administrator; FAX: 609-860-8977.**

Biology. **ASSISTANT PROFESSOR**, tenure track, beginning August 2001 or January 2002. Applicants must have a Ph.D. in the biological sciences with an emphasis in invertebrate biology. Upper-division teaching responsibilities include entomology and genetics with responsibility in ecology, aquatic biology, and/or parasitology. Evidence of successful teaching and continued scholarship is required. Review of applications will begin July 16, 2001, and continue until filled. Submit cover letter, résumé, unofficial transcripts, and contact information for three professional references to: **Dr. J. T. Wright, Department of Biology, Georgia Southwestern State University, 800 Wheatley Street, Americus, GA 31709.** To learn more about this position and GSW, visit our website: **[www.gsw.edu](http://www.gsw.edu)**. *GSW is an Equal Employment Opportunity/Affirmative Action/Americans With Disabilities Act Employer.*



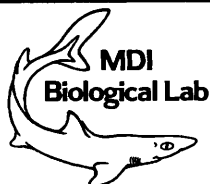
## Senior Science Editor Environmental Health Perspectives

National Institute of Environmental Health Sciences  
National Institutes of Health  
Research Triangle Park, NC

The National Institute of Environmental Health Sciences (NIEHS), located in Research Triangle Park, North Carolina, is accepting applications for the position of Senior Science Editor of *Environmental Health Perspectives*, a monthly scientific journal that presents the most recent findings in the field of environmental science research and examines the most important and controversial issues facing the global environment today. This is a permanent civil service position with a salary range of \$61,749 - \$94,862.

Candidates must have extensive knowledge of the environmental health sciences, including the fields of physiology, biochemistry, genetics, molecular biology, ecology, and toxicology, and, in this regard, must be able to assess scientific quality in the written works of colleagues covering a broad range of investigations. In addition, the candidate must possess a high level of writing skills to communicate difficult ideas in a clear and concise manner. A job summary, qualification requirements, and application procedures are provided in vacancy announcement NIEHS-AR-01-1014, which may be obtained by calling 919-541-0218; by writing the NIEHS Personnel Office, P.O. Box 12233 (MD EC-11), Research Triangle Park, NC 27709; or online at [www.niehs.nih.gov/vacancy/vacancy.htm](http://www.niehs.nih.gov/vacancy/vacancy.htm). For additional information about the position, you may call Dr. Gary Hook, 919-541-3900.

APPLICATIONS MUST BE POSTMARKED BY JULY 2, 2001  
NIH IS AN EQUAL OPPORTUNITY EMPLOYER



### RESEARCH SCIENTISTS TOXICOLOGY/TOXICOGENOMICS CELL BIOLOGY/PHYSIOLOGY

Mount Desert Island Biological Laboratory (MDIBL), located on Mount Desert Island, Maine, home of Acadia National Park, is a 103-year-old independent research institution. The Laboratory has world class seasonal scientific and educational programs and an expanding year round research program, funded in part by the NIEHS Center for Membrane Toxicity Studies.

MDIBL invites applications for two research scientist positions at the level of Investigator. Candidates should have, or be competitive to attain, a funded research program in toxicology/toxicogenomics or cell biology/physiology using marine species. Preference will be given to candidates incorporating the following into their research plans: toxicogenomics, marine transgenic species, and new marine cell lines.

Interest in collaboration with other scientists at MDIBL is essential. The positions include attractive startup and transition funding and eligibility for a faculty appointment in graduate programs at the University of Maine, Orono, in association with The Jackson Laboratory, Bar Harbor. Additional information on MDIBL is located at [www.mdibl.org](http://www.mdibl.org).

Please send letter of interest, curriculum vita, and the names and addresses of three references to: **Dr. John Forrest, Mount Desert Island Biological Laboratory, Box 35, Salisbury Cove, ME 04672.** [phand@mdibl.org](mailto:phand@mdibl.org) MDI Biological Laboratory is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.

## Vacancies

### Research Scientists

in biomedical nanotechnology

#### WHO WE ARE

The newly founded

#### Center of Biomedical Nanotechnology (CBN) in Berlin, Germany

is dedicated to research, education and the development of **biomedical applications of nanoscaled materials**. CBN houses currently **two young companies** (medical technology and biotechnology) and the **biomedical nanotechnology group of the University Clinic Charité**. All are members of the National Nanotechnology Competence Center „NanoChem“ supported by the German Ministry of Science and Education (BMB+F).

#### WE ARE OFFERING

positions from a wide range of disciplinary backgrounds, including pharmacology, biology, (bio-) chemistry, (veterinary-) medicine and (solid state-) physics in the name of one of the companies which is seriously supported by Venture Capital and governmental capital and the University Clinic Charité. With an existing network of university hospitals and nanomaterial science institutes, a broad spectrum of basic and applied research as well as clinical evaluation of new devices and methods will start with new competitive projects this year. Emphasis lies on biocompatible magnetic nanoparticles, polymer coatings and other metallic oxide formulations for high performance medical products.

#### QUALIFICATIONS

A broad practical experience preferentially in (iron oxide) nanoparticle research and its preclinical evaluation (full particle characterization, in vitro and in vivo testing) is essential as well as a solid interdisciplinary scientific background in nanomaterial synthesis, characterization and application in biological systems. The successful candidates are expected to direct technicians and students. Candidates who wish to work with the company should especially be keen to experimentally convert the company's fascinating ideas and concepts into real biomedical products by providing solutions to complex problems.

#### HOW TO APPLY

Only written applications (no Email) are accepted and should include a brief letter stating the reasons for the application, a Curriculum Vitae, a list of publications of the last three years and at least two letters of recommendation. Salary will match qualifications and personal engagement. The CBN offers a challenging, scientific environment, and opportunity for advancement.

Please send applications to:

Center of Biomedical Nanotechnology (CBN)  
Spandauer Damm 130, Haus 30  
14050 Berlin, Germany  
att.: Ms. Karen Warning

## POSITIONS OPEN

### HIV MOLECULAR MECHANISMS

**POSTDOCTORAL POSITION** available to investigate the structure and function of the HIV-1 Rev protein and the mechanism of its multimeric assembly on RNA. Candidates with a commitment to excellence and an interest in multidisciplinary research combining molecular biology, biochemistry, and genetics are encouraged to apply. See **Jain and Belasco**, *Mol. Cell* 7:603-614, 2001. Website: <http://saturn.med.nyu.edu/groups/BelascoLab/>. Send curriculum vitae, a brief summary of research experience, and the names of two references to: **Dr. Joel Belasco**, Skirball Institute, New York University School of Medicine, 540 First Avenue, New York, NY 10016.

### POSTDOCTORAL POSITION Department of Physiology The University of Tennessee Health Science Center

Position immediately available to study paracrine signaling in the cerebral vasculature with emphasis on the regulation of  $Ca^{2+}$  sparks and ion channels in smooth muscle cells (see *Am. J. Physiol.* 278:C235-256, 2000). Qualifications: Doctorate in physiology or related field. Experience with patch clamp, confocal microscopy, or calcium fluorescence beneficial. Please send curriculum vitae and letters of reference to: **Jonathan H. Jaggar, Ph.D.** or **Charles W. Lefler, Ph.D.**, Department of Physiology, University of Tennessee Health Science Center, 894 Union Avenue, Memphis, TN 38163 U.S.A. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Employer.

### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Position available immediately to study the molecular mechanism by which members of the TGF-beta superfamily regulate breast epithelial cell growth and differentiation. Experimental approaches will include both molecular biology and gene targeting in mice. Candidates should have a Ph.D. in biology or related field. Please send curriculum vitae including names of three references to: **Dr. Shyamala Maheswaran, Assistant Professor, Department of Pediatric Surgery, WRN1024, Massachusetts General Hospital, 55 Fruit Street, Boston, MA 02114. FAX: 617-724-7221; e-mail: maheswaran@helix.mgh.harvard.edu.**

**POSTDOCTORAL POSITION** available to study the function of a novel class of signaling proteins in the regulation of cellular transformation. Studies are performed in cultured cells to define specific pathways targeted by these proteins, their involvement in protein-protein interactions, and their functional domains. Requires Ph.D. or M.D. and significant expertise in general molecular biology. Experience in the analysis of signal transduction pathways is desirable. Send cover letter, curriculum vitae, and names of references to: **Dr. Jack H. Lichy, Department of Cellular Pathology and Genetics, Armed Forces Institute of Pathology, 1413 Research Boulevard, Building 101, Rockville, MD 20850. FAX: 301-295-9507; e-mail: lichy@afip.osd.mil.**

**ELECTROPHYSIOLOGIST** at University of California Los Angeles: **POSTDOCTORAL POSITIONS** available immediately to study the signaling pathways regulating G protein-coupled receptors and ion channels. Applicants must have a Ph.D. or M.D. Experience in patch clamping and cell culture is desirable. Competitive salary and benefits. Send curriculum vitae to: **Dr. Cui-Wei Xie, Department of Psychiatry, University of California Los Angeles, 760 Westwood Plaza, Los Angeles, CA 90024. E-mail: xiexy@ucla.edu.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS Institute for Human Gene Therapy Department of Molecular and Cellular Engineering University of Pennsylvania Health System

Positions available for Postdoctoral Fellows in the laboratory of **Dr. James M. Wilson** to study pathogenesis of cystic fibrosis, molecular virology of adenovirus, adeno-associated virus, and lentivirus, immunology of gene therapy, and regulated gene expression. Please forward curriculum vitae and the names of three references to:

**James M. Wilson, M.D., Ph.D.**  
Director, Institute for Human Gene Therapy  
University of Pennsylvania Health System  
Room 204 Wistar Institute  
3601 Spruce Street  
Philadelphia, PA 19104-4268  
E-mail: wilsonjm@mail.med.upenn.edu

### HEALTH RESEARCH ANALYSTS

ECRI, a nonprofit health services research organization, seeks individuals with the ability to work with in a team-oriented "think tank" to assess the effectiveness of medical devices, drugs, and procedures. Ph.D. in life or social sciences, ability to critically assess study designs, excellent writing skills, and ability to work simultaneously on several projects. Knowledge of at least intermediate-level statistics, decision analysis, or computer modeling preferred. Qualified applicants must complete a 25-page test report for which there is a small honorarium. Résumés and cover letter to: **Department CT, ECRI, 5200 Butler Pike, Plymouth Meeting, PA 19462. FAX: 610-567-1208; e-mail: hr@ecri.org.** Equal Opportunity Employer/Affirmative Action.

**POSTDOCTORAL ASSOCIATE POSITIONS** (two) are available immediately to investigate (1) the development of brain and carbohydrate metabolism in a knockout mouse model of pyruvate dehydrogenase complex deficiency and (2) the interactions of signaling pathways/molecular mechanisms of diet-induced hyperinsulinemia in the rat. Recent Ph.D. with experience in molecular biology, biochemistry, and/or cell biology may apply. Send curriculum vitae and the names of three references to: **Dr. Mulchand S. Patel, Department of Biochemistry, State University of New York at Buffalo, 140 Farber Hall, Buffalo, NY 14214. E-mail: mspatel@buffalo.edu.**

A **POSTDOCTORAL POSITION** is available immediately at the Department of Surgery, Yale University School of Medicine, to study the cellular and molecular basis of inflammation with special emphasis on A-to-I RNA editing. Individuals with a Ph.D. degree and experience in molecular biology, signal transduction, and biochemistry are particularly encouraged to apply. Send a letter of application, curriculum vitae, and the names of three references to: **Jinghua Yang, Ph.D., Yale University School of Medicine, 333 Cedar Street LH118, New Haven, CT 06520. E-mail: jinghua.yang@yale.edu.**

### POSTDOCTORAL POSITION

Available immediately to conduct research on the active sites of dehydrogenases and other nucleotide-binding enzymes using site-directed mutagenesis, affinity labeling, and crystallography. Recent Ph.D. in biochemistry, molecular biology, or biophysics required. Send curriculum vitae and names of three references to: **Dr. Roberta F. Colman, Department of Chemistry, University of Delaware, Newark, DE 19716. An Equal Opportunity/Affirmative Action Employer.**

### RESEARCH SCIENTIST Molecular Evolution and High-Throughput Screening of Proteins

The Protein Screening Department of Novozymes A/S, Denmark, seeks an exceptionally motivated and talented Research Scientist to develop and implement technology for efficient improvement of protein functionality. Read more about the position at website: [www.novozymes.com/jobs](http://www.novozymes.com/jobs).

## POSITIONS OPEN

**POSTDOCTORAL FELLOW** in molecular biology/signal transduction at Center for Study of Gene Structure and Function in Hunter College, City University of New York. Salary: \$35,000 or above commensurate with qualifications. E-mail résumé to: **Dr. Robert Dottin, Program Director; e-mail: research@genectr.hunter.cuny.edu.** Equal Opportunity Employer/Affirmative Action.

A position of **ASSISTANT PROFESSOR** on the tenured track is available for a person to work in a multidisciplinary program of vaccine development and protein engineering at The Ohio State University. Applicants should hold a Ph.D. degree in the field of immunology with experience and/or postdoctoral training in vaccine development. Duties will include primarily research with some teaching required in microbiology and immunology. The successful candidate will be expected to obtain independent extramural support for research activities as well as to collaborate with other Scientists in an established program of the development of cancer vaccines and vaccines against infectious diseases. A competitive salary based on individual qualifications will be negotiated with short-list candidates. Letters of application together with complete curriculum vitae should be sent to: **Dr. Pravin Kaumaya, The Ohio State University, Suite 302, The Comprehensive Cancer Center, 410 West 12th Avenue, Columbus, OH 43210.**

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, disabled veterans, and the disabled are encouraged to apply.

### BIOCHEMISTRY Temple University School of Medicine

Biochemistry: A **POSTDOCTORAL POSITION** is immediately available to study the role of intracellular immunization (gene therapy) as an anti-HIV-1 therapy. The research requires a candidate with experience in plasmid design and construction, transfection, and transduction into human hematopoietic cells (CD34+). Experience in blot analyses, RT-PCR, and enzyme assays is essential. You are invited to send curriculum vitae, research interests, experience in HIV-1 research, and three letters of recommendation to: **Robert J. Suhadolnik, Ph.D., Department of Biochemistry and Molecular Biology, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140.** Temple is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and minorities.

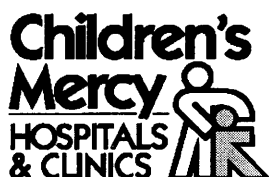
**POSTDOCTORAL POSITION** available to study bioinformatics/genomics, biochemistry, and molecular biology and structural biology of vesicle traffic in early secretory pathway. Interested candidates should send curriculum vitae and three reference letters to: **Dr. William E. Balch, The Scripps Research Institute, 10500 North Torrey Pines Road, IMM11, La Jolla, CA 92037. FAX: 858-784-9126; e-mail: webalch@scripps.edu.** The Scripps Research Institute is an Equal Opportunity Employer.

### JOHNS HOPKINS ONCOLOGY CENTER

Two **POSTDOCTORAL POSITIONS** are available to study FLT3, a receptor tyrosine kinase often mutated in leukemia. A good background in cellular and molecular biology is required. Preference is given to permanent residents or citizens of the United States. Please respond by e-mail or FAX with curriculum vitae and three references to: **Donald Small, M.D., Ph.D., CRB Room 253, 1650 Orleans Street, Baltimore, MD 21231. Telephone: 410-614-0994; FAX: 410-955-8897; e-mail: donsma1@jhmi.edu.**

## RESEARCH SCIENTIST

Children's Mercy Hospitals & Clinics, located in Kansas City, Missouri, has a Postdoctoral level position available to conduct research in a long-term study in bone marrow transplantation and stem cell plasticity for introduction of a human transgene into mouse models of muscular dystrophy. This position is planned for two years with potential for renewal. Requirements are a Ph.D. in Biology/Molecular Biology with an emphasis in mouse genetics or mouse hematology. Please reply to **Dr. Robert White, Ph.D., Biomolecular Laboratories, Children's Mercy Hospitals & Clinics, 2801 Wyandotte Avenue, Kansas City, MO 64108, e-mail: rwhite@cmh.edu, fax, 816-855-1989.**



2401 Gillham Road  
Kansas City, MO 64108  
Childrens-mercy.org

EOE/AAP

## GLOBAL OPPORTUNITIES



## INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

### POSITION ANNOUNCEMENTS

The International Livestock Research Institute (ILRI) is a non-profit international research organisation, serving a global mandate to improve productivity of small-holder livestock systems and to protect the natural resources that support these systems. ILRI has staff and research activities in Latin America, Asia and Africa. ILRI's principal research facilities are located in Kenya and Ethiopia and its headquarters are based in Nairobi, Kenya.

*ILRI currently has the following positions available:*

**People, Livestock and Environment and Systems Analysis and Impact Assessment Programmes: Scientist - Remote Sensing:** to lead activities related to the development of remote sensing tools and techniques and their application in systems ecology and in pastoral and crop-livestock systems across the developing world.

**People, Livestock and Environment Programme: Scientist - Ecosystem Modeller:** to strengthen an active ecosystem research team focused on understanding the structure and function of ecosystems in pastoral and crop-livestock systems across the developing world.

#### Applications:

Detailed information, terms of reference and screening deadlines on each of the positions are available from the ILRI website at <http://www.cgiar.org/ilri/> or email ILRI-KENYA@cgiar.org for details.

Applicants should send a cover letter, curriculum vitae and the names and addresses (including telephone, fax and email) of three referees who are knowledgeable about the candidate's professional qualifications and work experience to the **Human Resources Manager, ILRI, P.O. Box 30709, Nairobi, Kenya; Telephone: 254-2-630743; Fax: 254-2-631499; e-mail: ILRI-KENYA@cgiar.org.** The name and reference number of the position for which the application is made should be clearly quoted.

*ILRI is an equal opportunity employer. Qualified women and professionals from developing countries are particularly encouraged to apply.*

## MEETINGS AND ANNOUNCEMENTS

Six Belgian universities join their expertise and organize an:

### Inter-University DEA/DES (Master) in Bioinformatics

#### Course modules:

- Introduction to bioinformatics
- Elements of statistics
- Biological databases
- Nucleotidic and peptidic sequence analysis
- Protein structure
- Genomics and proteomics
- Phylogeny inference
- Elements of programming
- Modeling of cellular processes

The program includes 180h of course and 120h of practical training, from October to March. Courses are given in English.

Details and inscription forms are available at:

<http://www.ucmb.ulb.ac.be/bioinfomaster>

## Gene technology – the impact on the human dimension 30-31 August 2001, Salzburg, Austria

The European Academy of Sciences and Arts and the Institute of Medicine of the National Academy of Sciences of the United States of America are jointly organizing this workshop with the hope to bring together persons from different national cultures and understand the responses of different nations to the scientific developments in sequencing of the human genome and breakthroughs in somatic cell nuclear transplantation and stem cell technologies which offer the promise of dramatic therapeutic advances.

This meeting is intended to stimulate thinking about the direction of basic and clinical research, foster ways in which public policies and professional guidelines can keep pace with scientific advances, and address public concerns about these promising new discoveries.

In addition, the meeting will bring together leaders in scientific disciplines with scholars in philosophy, law, public policy, and theology, to develop a comprehensive understanding of this new research.

The conference will be organized into four parts:

- "What are the next steps?" will present the current state of the art in genomics and related fields, as well as directions for future research.
- "Clinical applications of genomics and other technologies" will discuss the potential applications to clinical medicine.
- In "The human dimension of genomics," philosophers, theologians, lawyers, scientists, and industry leaders will analyze the ethical and policy issues that these new discoveries raise.
- "Future claims" will discuss possible future developments and the impact of these scientific discoveries on our image of mankind and society.

**European Academy of Sciences and Arts**  
Felix Unger (President)  
Konrad Messmer

**Institute of Medicine of the National Academies of the United States of America**  
Kenneth I. Shine (President)  
Mary-Claire King; Bernhard Lo; Nancy S. Wexler

Information and registration:

**European Academy of Sciences and Arts**  
General Office: Körntner Ring 14/4, 1010 Vienna  
Tel. +43/1/5125760, Fax +43/1/5125760-10

e-mail: [office@european-academy.at](mailto:office@european-academy.at), <http://www.european-academy.at>

## POSITIONS OPEN

UNIVERSITY OF MINNESOTA

**Cancer Center**



### RESEARCH ASSOCIATE LEUKEMIA BIOLOGY

The University of Minnesota Cancer Center announces a full-time annually renewable Research Associate position to conduct and supervise studies of the biology of acute leukemia. Applicants must have a Ph.D. in biological sciences, the foreign equivalent, or an M.D. with a minimum of one year of research training with significant experience/training in molecular genetic techniques including development of DNA constructs and tissue culture. Previous experience in murine systems including embryonic stem cells is preferred. The position is in the laboratory of **Dr. John Kersey**.

Qualified applicants should submit curriculum vitae and the names and addresses of three references to: **University of Minnesota Cancer Center, c/o Melissa Daufelt, Mayo Mail Code 806, 420 Delaware Avenue S.E., Minneapolis, MN 55455.**

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

### POSTDOCTORAL POSITION National Cancer Institute

The Biological Mechanisms Section (BMS), Basic Research Laboratory, Division of Basic Sciences, National Cancer Institute-Frederick, National Institutes of Health, under the direction of **Douglas Ferris, Ph.D.**, is working toward understanding the regulation and functions of polrelated kinases during cell cycle progression and oncogenic transformation, principally using cultured mammalian cells as model systems. The BMS is seeking highly qualified Postdoctoral Fellows with a strong background in molecular biology and cell biology and familiarity with protein biochemistry techniques.

Appointment duration is for up to five years and renewed on a yearly basis. Stipend is based on education and experience with a range of \$31,500 to \$42,910. This position is available immediately.

Interested applicants must possess a Ph.D. and/or an M.D. and have no more than five years of postdoctoral experience (maximum eligibility is eight years). Submit a résumé and three letters of reference by June 30, 2001, to: **Dr. Doug Ferris, NCI-FCRDC, Frederick, MD 21702.** E-mail: [Ferris@mail.ncifcrf.gov](mailto:Ferris@mail.ncifcrf.gov).

*NIH is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS Molecular Biology Boston, Massachusetts

Positions available immediately for studies on cloning and expression of structural proteins, collagens and silks. NIH- and NSF-funded positions for Ph.D. with strong background in molecular biology and biochemistry. Work with a larger team involved in molecular biophysics, biomaterials, and tissue engineering. Résumé and three letters of reference to: **Dr. David Kaplan, Tufts University, Biotechnology Center, Medford, MA 02155.** E-mail: [david.kaplan@tufts.edu](mailto:david.kaplan@tufts.edu). *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION University of Pennsylvania

NIH-funded position available to study the effects of radiation on the cell cycle and on cell cycle-regulated transcription. Please send curriculum vitae and three references to: **Ruth J. Muschel, M.D., Ph.D., University of Pennsylvania, Room 269, John Morgan Building, 3620 Hamilton Walk, Philadelphia, PA 19103.** E-mail: [muschel@xrt.upenn.edu](mailto:muschel@xrt.upenn.edu).

## POSITIONS OPEN

### DIRECTOR IMMUNOLOGICAL RESOURCE CENTER University of Illinois, Urbana-Champaign

Proposed starting date: August 10, 2001, or as soon as possible

Responsibilities: The Immunological Resource Center (IRC) is a core antibody development and application facility that is maintained to assist Research Scientists with antibody technology. The Director is expected to interact closely with faculty, university, and industrial partners to develop and interpret a wide array of immunological tools and to develop protein expression tools to facilitate research in functional genomics and proteomics. In addition, the Director is responsible for providing leadership in the continued development and implementation of new technologies, managing facility personnel, managing animal use protocols, and budgeting.

Qualifications: Minimum qualifications include a Ph.D. or M.S. with relevant immunological experience. Candidates with a Ph.D. are preferred but candidates with an M.S. with extensive experience will be considered. Expertise in a wide array of immunological techniques including monoclonal antibodies, antigen preparation, chemical modification of antigens and antibodies, antibody purification, and use of antibodies to purify biologically active antigens. Strong technical skills and the ability to troubleshoot; excellent organizational, managerial, and supervisory skills.

Type of position and salary: full-time, 12-month regular academic professional position. Salary is commensurate with experience.

Application Send letters of application and résumé including the names, telephone numbers, and addresses of three references to:

**Rhonda Lipking  
Biotechnology Center  
103 Observatory  
Urbana, IL 61801**

Telephone: 217-333-1695

FAX: 217-244-0466

E-mail: [lipking@staff.uiuc.edu](mailto:lipking@staff.uiuc.edu)

For questions, contact: **Barbara Whitmarsh, Ph.D., Associate Director, Biotechnology Center, 901 South Mathews Avenue, Urbana, IL 61801.** Telephone: 217-244-0144; e-mail: [whitmars@staff.uiuc.edu](mailto:whitmars@staff.uiuc.edu). Deadline: For full consideration, applications must be received by 5 p.m. on Tuesday, July 10, 2001. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS

Postdoctoral positions are available for candidates who have a strong background in molecular biology, immunology, or neurophysiology and a desire to join an interdisciplinary NIH- and U.S. Department of Agriculture-funded team. One position will involve investigations of innate immune mechanisms focusing on the regulation of gene expression of antimicrobial peptides. A second position will focus on the central neural circuitry mediating sympathetic nerve-immune system interactions. Prior experience in any of the following areas is preferred: promoter analysis, transgene expression, microarray analysis, or electrophysiology. Applicants should have a Ph.D. and/or M.D. or D.V.M. degree. Please send curriculum vitae; a brief statement of research interests; and the names, telephone numbers, addresses, and e-mail addresses of three references to: **Drs. Frank Blecha and/or Michael Kenney, Department of Anatomy and Physiology, Kansas State University, 228 Coles Hall, Manhattan, KS 66502-5802.** Additional information concerning our programs is available at **website: [www.vet.ksu.edu/depts/ap](http://www.vet.ksu.edu/depts/ap).** *Kansas State University is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available for MR Spectroscopists/Chemists/Molecular Biologists to work on molecular and functional imaging of cancer. Apply to: **Z. M. Bhujwala, Department of Radiology, The Johns Hopkins University School of Medicine, Traylor 208C, 720 Rutland Avenue, Baltimore, MD 21205.** E-mail: [zaver@mri.jhu.edu](mailto:zaver@mri.jhu.edu). *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN



### RESEARCH SCIENTIST

The Immunology and Disease Resistance Laboratory, Livestock and Poultry Sciences Institute, Beltsville Agricultural Research Service, Agricultural Research Service (ARS), U.S. Department of Agriculture (USDA), Beltsville, Maryland, is seeking two permanent full-time Scientists to conduct research on dairy cattle immune responses to mastitic infections. Incumbent(s) will work within a broader program of bovine mucosal immunity and control of infectious organisms and is responsible for independently conducting research to characterize the bovine immune system and for developing means to use host immunity to control intramammary infections. Salary range (GS12-15) is \$53,156 to \$114,224 per annum and is commensurate with experience. *Candidates must be U.S. citizens.* These positions have specific education and experience requirements and factors that must be addressed. For a copy of the announcement, **Telephone: 301-504-1482; website: [www.ars.usda.gov/afm2/divisions/hrd/index.html](http://www.ars.usda.gov/afm2/divisions/hrd/index.html).** Announcement ARS-D1E-1372. Applications must be postmarked by July 30, 2001. For information on the laboratory's research program, see **website: <http://www.anri.barc.usda.gov/idrl>.** *USDA/ARS is an Equal Opportunity Provider and Employer.*

### RESEARCH ASSOCIATES YALE UNIVERSITY SCHOOL OF MEDICINE

Seeking Master's degree level or equivalent with backgrounds in the following areas: molecular biology, cell and tissue culture, immunology, biochemistry, radiological techniques, bioinformatics, or functional genomic research to support biomedical research in all areas of the Yale School of Medicine. Competitive salary and excellent benefits. E-mail résumé and cover letter to **e-mail: [jobs@yale.edu](mailto:jobs@yale.edu)** (use Source Code EASCM01SG) or **FAX: 203-432-9817.** Visit our **website: [www.yale.edu/hronline](http://www.yale.edu/hronline).** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH POSITION** at Princeton University immediately available to study the identification of genes, gene expression, and proteins in a single cell using innovative nanostructures. The successful candidate will have a Ph.D. with a strong background in molecular and cellular biology, biophysics, or biochemistry.

Please send curriculum vitae and names of three references to: **Professor Stephen Chou, Department of Electrical Engineering, Princeton University, Princeton, NJ 08544.** E-mail: [chou@ee.princeton.edu](mailto:chou@ee.princeton.edu). *Princeton is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** in NIH-funded laboratory studying rheumatoid arthritis: (1) gene therapy and (2) angiogenesis, cell adhesion, and cytokines (*Nature* 376:517; *Science* 258:1798; *J. Clin. Invest.* 101:746). Experience with adenoviral vectors, immunoassays, angiogenesis and cell adhesion assays, arthritis animal models, gene knockout mice, and molecular biology desirable. Send curriculum vitae and three reference names to: **Dr. Alisa Koch, Northwestern University Medical School, Ward 3-315, 303 East Chicago Avenue, Chicago, IL 60611.** FAX: 312-503-0994; e-mail: [aekoch@northwestern.edu](mailto:aekoch@northwestern.edu).

**POSTDOCTORAL POSITIONS** available immediately in an NIH-funded project to investigate signal transduction and mechanisms of cell death in cardiovascular disease. Experience in cellular biology and gene cloning is essential. Send curriculum vitae, transcript of highest earned degree, and three letters of recommendation to: **Dr. Tuan H. Kuo, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.** E-mail: [tkuo@med.wayne.edu](mailto:tkuo@med.wayne.edu). *Wayne State University/Equal Employment Opportunity/Affirmative Action.*

**Avian Population Biology**  
**Department of Biological Sciences**  
**Simon Fraser University**

The Department of Biological Sciences is seeking a tenure track faculty member in the area of Avian Population Biology. We seek an individual working in any area of avian population biology, to complement the existing strengths of the Center for Wildlife Ecology (<http://www.sfu.ca/biology/wildberg/index.html>). Given the mandate of the Center, we will consider evidence of willingness and ability to work with government agencies, and an interest in the application of research to conservation and management issues. The successful candidate will pursue a vigorous, externally funded research program, train graduate students, and carry a regular teaching load. The appointment can be made at any rank, contingent on appropriate experience. Minimally, a Ph.D. degree is required, and appropriate postdoctoral experience is preferred. Applicants should send, no later than August 1, 2001, a Curriculum Vitae, representative reprints, a one-page summary of their research objectives, and three letters of reference to:

**Dr. Norbert H. Haunerland, Chair**  
**Department of Biological Sciences**  
**Simon Fraser University**  
**8888 University Blvd.**  
**Burnaby, B.C. V5A 1S6**  
**Canada**  
**FAX 604-291-4312**

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. This position is subject to final budgetary approval.

*Simon Fraser University is committed to employment equity, welcomes diversity in the workplace, and encourages applications from all qualified individuals including women, members of visible minorities, aboriginal persons, and persons with disabilities.*

**CONFERENCES**

# SAGE 2001

**FRONTIERS IN TRANSCRIPTOME EXPLORATION**

**Marriott Hotel, Coronado, California**  
**Saturday, September 8th - Tuesday, September 11th**

**TOPICS**

- ☐ Combining SAGE and Human Genome data to generate new information on the transcriptome
- ☐ Application of SAGE in human and animal diseases, plant studies and in elucidation of gene function
- ☐ Advances in SAGE and complementary methodologies
- ☐ Advances in bioinformatics for the analysis of gene expression data

**FACULTY**

- Dr. Greg Riggins, Durham, NC (Chair)
- Dr. Victor Velculescu, Baltimore, MD
- Dr. Frank Baas, Amsterdam, NL
- Dr. Jean-Marc Elalouf, Paris, France
- Dr. Steve Madden, Cambridge, MA
- Dr. Robert Strausberg, Bethesda, MD

**ABSTRACTS**

- Submit abstracts to [slocu002@mc.duke.edu](mailto:slocu002@mc.duke.edu).
- For further information on SAGE 2001 please contact (508) 271-2627 or (508) 271-2281.

[www.sagenet.org/SAGE2001.htm](http://www.sagenet.org/SAGE2001.htm)

**MEETINGS**



**2nd Cold Spring Harbor Meeting on Computational Biology**  
**Integrating Genome Sequence,**  
**Sequence Variation & Gene Expression**  
**September 28 - 30, 2001**  
**Cold Spring Harbor, New York**  
**Abstracts Due: July 3**

**Organized by:**

**Aravinda Chakravarti, Johns Hopkins Hospital**  
**Michael Eisen, Lawrence Berkeley National Laboratory**  
**Michael Zhang, Cold Spring Harbor Laboratory**

**Topics Include:**

- Analysis of Sequence Variation & Gene Expression
- Modelling Global Gene Expression
- Modelling Whole Genome Variation
- Integrating Genomics and Biological Function

**Speakers Include:**

**Susan Celniker, David Cox, Jean-Michel Claverie,**  
**Evan Eichler, Ira Herskowitz, Partha Mitra, Gerry Rubin,**  
**Eric Siggia, Lincoln Stein**



**Joint Cold Spring Harbor Laboratory/  
 Wellcome Trust Conference**  
**Genome Informatics**  
**August 8 - 12, 2001**



**Wellcome Trust Genome Campus, Hinxton, UK**

**Organized by:**

**Ewan Birney, European Bioinformatics Institute**  
**Suzanna Lewis, University of California, Berkeley**  
**Lincoln Stein, Cold Spring Harbor Laboratory**

**Topics Include:**

- Annotation Pipelines • Genome Assembly
- Gene Prediction • Functional Genomics
- Gene Ontology • Genome Visualization
- Software Engineering

**Speakers Include:**

**Michael Ashburner, Mike Cherry, Michele Clamp,**  
**Richard Durbin, Jim Kent, Anders Krogh**  
**John Quackenbush, Jim Mullikin, Chris Mungall**  
**John Richter, Joel Richardson**

**Registration: [www.cshl.org/meetings/hinxton.htm](http://www.cshl.org/meetings/hinxton.htm)**

**Other Fall Meetings at CSHL, New York**

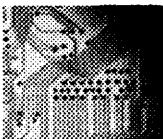
- Yeast Cell Biology
- Eukaryotic mRNA Processing
- Mechanisms of Eukaryotic Transcription
- Eukaryotic DNA Replication
- Microbial Pathogenesis & Host Response
- Programmed Cell Death
- Neurobiology of *Drosophila*
- Molecular Approaches to Vaccine Design
- Physiological Genomics & Rat Models

**Cold Spring Harbor Laboratory**  
**Meetings & Courses Programs**  
**1 Bungtown Rd., Cold Spring Harbor, N.Y. 11724**  
**Phone: (516) 367-8346 Fax: (516) 367-8845**  
**Email: [meetings@cschl.org](mailto:meetings@cschl.org)**  
**[www.cshl.org/meetings](http://www.cshl.org/meetings)**



# Bioinformatics

PROFESSIONAL MASTER'S DEGREE PROGRAMS



## These Programs Feature:

- Two-year course intensive program with business/industry internship.
- Interdisciplinary training in computer science and molecular biology.
- Business and industry contacts.
- Job placement.



## Great Career Opportunities!

The number of bioinformatics jobs advertised in *Science* magazine has been increasing every year with starting salaries at the master's level in the \$60,000 range.

"Scientists cross-trained in computer science and molecular biology are essential partners in the drug discovery process. By transforming the raw data of the human genome into useful information, they will enable some of the most impressive advances in drug discovery in the near future."

Enoch S. Huang, Ph.D.  
Senior Research Scientist  
Pfizer Discovery Technology Center

## These Sloan Foundation funded programs are currently enrolling new students:

- Arizona State University (not enrolling until 2002-2003)
- Boston University/Northeastern University Cooperative Program \*
- Georgia Institute of Technology
- Keck Graduate Institute of Applied Life Science
- New Jersey Institute of Technology
- Rensselaer Polytechnic Institute
- Rochester Institute of Technology (not enrolling until 2002-2003)
- University of California at Los Angeles
- University of California at Santa Cruz
- University of Southern California
- University of Texas at El Paso

\* Degrees will be earned at either, not both universities.

If you are an employer, we'd like to hear from you!  
Please contact us at [outreach@sciencemasters.com](mailto:outreach@sciencemasters.com)

[www.sciencemasters.com/cmb](http://www.sciencemasters.com/cmb)

## REQUEST FOR PROPOSALS

The Biotechnology Research and Development Corporation (BRDC) is a for profit R&D consortium dedicated to funding basic research in the broad area of agricultural biotechnology. Our interests include both animal and plant sciences. Equity holders in BRDC include several of the world's largest agricultural biotechnology and animal health companies. BRDC has research contract agreements with dozens of major universities and the USDA's Agricultural Research Service. BRDC has recently committed to fund research in the development of novel plant transformation systems.

BRDC is seeking proposals to achieve a substantial breakthrough in plant transformation efficiency. The attributes of an ideal plant transformation system include the following:

- Applicable to one or more of the major crops including corn, soybean, wheat, cotton or rice;
- High throughput, meaning low cost and low labor requirements;
- No antibiotic resistance as required by recent EU regulations;
- Single copy inserts as required by recent EU regulations;
- Predictable and stable expression through successive generations of breeding and seed increase.

We encourage collaborative efforts among different research laboratories and institutions that bridge disciplines (e.g. molecular biology, tissue culture, cell biology, and genetics). There are additional opportunities to match BRDC funds with other funding sources to increase the magnitude of the effort. We anticipate funding one or two research projects for a duration of three or more years at a funding level of approximately \$500,000 per year.

For details on how to apply visit the BRDC web site at [www.biorcdc.com](http://www.biorcdc.com) and click on Research Opportunities. Due to legal constraints BRDC can only fund research within the United States at government laboratories, universities and non profit research institutes.

## WORKSHOPS



## ADVANCE YOUR CAREER BUILD YOUR FUTURE BIOINFORMATICS AT RENSSELAER

### Bioinformatics Summer Workshop: August 1-3, 2001

- Attend an introductory level workshop
- Learn through hands-on applications
- Hear leading experts discuss the latest in R&D
- Use powerful SGI 02 work stations

### Reserve your place.

### Find out more.

Call (518) 276-8442

or e-mail

[croned@rpi.edu](mailto:croned@rpi.edu)



**Rensselaer**

Rensselaer Polytechnic Institute  
Troy, NY

<http://www.pde.rpi.edu>

The premier worldwide meeting on state-of-the-art cancer therapeutics



AACR-NCI-EORTC International Conference

# Molecular Targets and Cancer Therapeutics:

*Discovery, Biology, and Clinical Applications*

October 29—November 2, 2001 • Fontainebleau Hilton Hotel • Miami Beach, Florida

Sponsored by the world's leading cancer research organizations, Molecular Targets and Cancer Therapeutics is the major annual forum for clinical investigators and laboratory scientists from all sectors to discuss the latest advances in this dynamic field. The rapid pace of discovery in molecular biology and genetics as it applies to cancer therapeutics makes this a meeting you can't afford to miss!

## SCIENTIFIC COMMITTEE

### CHAIRPERSONS

Carlos L. Arteaga, AACR

Edward A. Sausville, NCI • Jaap Verweij, EORTC

## ORGANIZING COMMITTEE

AACR

Waun Ki Hong  
President

NCI

Robert E. Wittes  
Director, DCTD

EORTC

A. T. van Oosterom  
President

Assisted by a Scientific Committee of 45 Distinguished International Scientists

### Plenary Sessions

(Chairperson in parentheses)

Keynote Talks by Axel Ullrich, David P. Lane

Functional Genomics (Jeffrey M. Trent)

Angiogenesis (Renata Pasqualini)

Anti-Invasion, Anti-Metastatic Strategies (David A. Cheresh)

Immunotherapeutic Approaches and Vaccines (Mary L. Disis)

Chemoprevention: Basic Science to the Clinic (Raymond N. DuBois)

Targeting ras/MAP Kinases (Said M. Sebti)

Signal Transduction Inhibitors (Gordon B. Mills)

The Tumor Cell Cycle as a Therapeutic Target (Edward A. Sausville)

### Simultaneous Workshops

(Chairperson in parentheses)

Viral Vector-based Therapeutic Approaches

(Stanton L. Gerson)

Molecular Approaches for Tumor Cell Sensitization to Radiotherapy (Jean-Claude Horiot and Elizabeth L. Travis)

Phase I/II Trials with Molecular Targeted Agents: Methodology and Clinical Endpoints (Jaap Verweij and Susan G. Arbuck)

Preclinical Models for Drug Discovery and Development (Robert A. Kramer)

Combinatorial and Medicinal Chemistry (Kenneth W. Bair)

Transcription- and Chromatin-based Approaches (Stephen B. Baylin)

### PLUS! Proffered Paper Sessions and Poster Sessions

Visit the Website, [www.aacr.org](http://www.aacr.org), for the latest program details and information about online abstract submission, online registration, and online housing arrangements. Or call the AACR Meetings Department at (215) 440-9300.

[www.aacr.org](http://www.aacr.org)

Call for Abstracts

MEETINGS and ANNOUNCEMENTS

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATES

The Center for Bio/Molecular Science and Engineering at the Naval Research Laboratory has openings for Postdoctoral Researchers. Positions are available in the areas of (1) self-assembled films of biomolecular materials, (2) surface characterization using optical and X-ray spectroscopy, (3) interaction of organic vapors with supramolecular structures and liquid crystals, (4) physical chemistry of biological interfaces, (5) metal-ligand interactions with DNA, (6) protein engineering, and (7) energy transfer in protein molecular ensembles. CBMSE is one of the nation's leading interdisciplinary research organizations applying modern techniques from the areas of chemistry, physics, molecular biology, materials science, and chemical engineering to a variety of studies. Starting postdoctoral salaries are \$53,000 per year and opportunities are excellent for transition to permanent status after a successful Postdoctoral tenure. Candidates must have received a Ph.D. in a relevant field within the past five years. Excellent written and oral communication skills, computer knowledge, and a demonstrated ability to interact with a multidisciplinary team are required. Postdoctoral positions are tenable through either the NRC Research Associateship Program or the ASEE/ONR Postdoctoral Fellowship Program. *U.S. citizenship or permanent residency is required.* Interested persons should send a résumé including a list of publications and references to: **Ms. Andrea Bryant, Code 6900, Naval Research Laboratory, Washington, DC 20375.** E-mail: [abryant@cbmse.nrl.navy.mil](mailto:abryant@cbmse.nrl.navy.mil). Please indicate area of interest from above. *NRL is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately for NIH-funded project focusing on RNA transsplicing and its role on mRNA metabolism. Successful candidate will (1) use RNA transfection, *in vitro* translation, and reporter assays to study the role of RNA spliced leader and variant cap structure on trans-spliced mRNA metabolism; and (2) characterize novel mRNA cap-binding proteins in parasitic nematodes. For additional research description, see website: [www.library.csi.cuny.edu/~davis/faculty\\_page/](http://www.library.csi.cuny.edu/~davis/faculty_page/). Experience in molecular biology/biochemistry and mRNA metabolism (translation or stability) preferred. Send curriculum vitae/résumé with research experience and three reference letters to: **Dr. Richard E. Davis, City University of New York Graduate Center, Biology 6S-143, 2800 Victory Boulevard, Staten Island, NY 10314.** E-mail: [redavis@postbox.csi.cuny.edu](mailto:redavis@postbox.csi.cuny.edu). *Research Foundation of CUNY is an Equal Opportunity/Affirmative Action/Americans With Disabilities Act Employer.*

**POSTDOCTORAL FELLOWSHIP** in experimental bone biomechanics available with the Connective Tissue Research Group, Samuel Lunenfeld Research Institute, Mount Sinai Hospital and University of Toronto, to work in a dynamic multidisciplinary research program on quality of bone in aging and disease and long-term effects of drugs and trace elements on the skeleton. The Institute also participates in the University's program on mouse models of human diseases. Ph.D. in engineering required. Some experience with mechanical and material properties of bone or other connective tissue and/or biomaterials advantageous. Send résumés to: **Professor Marc G. Grynpas, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, 600 University Avenue, Room 840, Toronto, Ontario M5G 1X5 Canada.** Telephone: 416-586-4464; FAX: 416-586-1554; e-mail: [grynpas@mshri.on.ca](mailto:grynpas@mshri.on.ca); website: [www.mshri.on.ca/grynpas/default.asp](http://www.mshri.on.ca/grynpas/default.asp).

**POSTDOCTORAL POSITION** to study proteins that regulate cell division. Ph.D. in biochemistry/molecular biology required. Join a team effort to perform proteomics research applicable to mammalian cloning, ES cell, and IVF technologies. Send cover letter, curriculum vitae, and the names of three references to: **Dr. Carol Warner, Department of Biology, 414 Mugar Hall, Northeastern University, Boston, MA 02115.** E-mail: [cmw@neu.edu](mailto:cmw@neu.edu).

## POSITIONS OPEN



University of California  
San Diego

### TWO POSTGRADUATE RESEARCH POSITIONS

Experimental and  
Theoretical Neural Engineering

Two three-year Postgraduate Research positions are available in the Neurosciences Working Group under the direction of **H. Abarbanel, M. Rabinovich, and A. Selverston.** We take a multidisciplinary approach to studying basic questions underlying the neural control of behavior. Projects focus on the application of nonlinear dynamics to study fundamental questions of information transfer, sensory processing, and motor pattern formation. We are especially interested in the use of invertebrate CPGs as model systems. We combine experimental and computational approaches to simulate the dynamical properties of these systems as well as to develop electronic neurons for testing in silicon/biological hybrid circuits. Applicants with backgrounds in neurophysiology, physics, or engineering are welcome to apply. Successful applicants will have the opportunity to acquire experience in all of these areas. Salary based on University of California salary scales. Please submit curriculum vitae and the names of three references by July 16, 2001, to:

**Terry Peters**  
UCSD, Institute for  
Nonlinear Science (INLS)  
9500 Gilman Drive  
Room 1G CMRR Building  
La Jolla, CA 92093-0402  
E-mail: [tpeters@ucsd.edu](mailto:tpeters@ucsd.edu)  
Telephone: 858-534-7753  
FAX: 858-534-7664

*University of California San Diego is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOWSHIPS**  
Harvard Institute of Human Genetics/  
Beth Israel Deaconess Medical Center  
Research Topic: Chromatin Remodeling,  
Dosage Compensation, and  
Mammalian X-Chromosome Inactivation

Competitive salary with generous benefits; three-to-four-year commitment required. Must have a demonstrated publication history and training in molecular biology or protein biochemistry. Please forward curriculum vitae including at least three references with telephone numbers to: **Dr. William M. Strauss, HHG, Harvard Medical School, 4 Blackfan Circle, Boston, MA 02115.** E-mail: [wstrauss@hhg.med.harvard.edu](mailto:wstrauss@hhg.med.harvard.edu).

**POSTDOCTORAL POSITIONS** available immediately to study enzymes involved in glycoprotein maturation and catabolism. Positions require experience in recombinant protein expression (preferably fungal and mammalian systems), protein purification/characterization, and/or protein structure determination by X-ray crystallography (in collaboration with **Dr. B. C. Wang**, Director of the UGA X-ray Crystallography Center). For further project descriptions, see website: <http://bmbiris.bmb.uga.edu/moremen.lab>. Send curriculum vitae and three letters of reference to: **Dr. Kelley Moremen, Biochemistry and Molecular Biology, University of Georgia, Athens, GA 30602.** FAX: 706-542-1759; e-mail: [moremen@arches.uga.edu](mailto:moremen@arches.uga.edu).

**POSTDOCTORAL POSITION** to study skeletal and cardiac muscle transcriptional regulation and intracellular signaling. E-mail your curriculum vitae to: **Jeffery D. Molkenin, Ph.D., Children's Hospital, University of Cincinnati, Cincinnati, OH U.S.A.** E-mail: [jeff.molkenin@chmc.org](mailto:jeff.molkenin@chmc.org); FAX: 513-636-5958. *Children's Hospital is an Equal Opportunity Institution.*

## POSITIONS OPEN

### POSTDOCTORAL POSITION

A Postdoctoral research position is available to conduct NIH grant-funded research in the molecular pathology, chemoprevention, and therapeutic targeting of biliary cancer. Our laboratory is interested in identifying and exploiting aberrant receptor tyrosine kinase pathways, abnormally expressed homeobox genes, and signaling disorders common to the pathogenesis of biliary cancer in the human and in the furan rat model of cholangiocarcinogenesis. Novel *in vitro* and *in vivo* experimental models of cholangiocarcinoma developed in our laboratory, together with a large unique collection of human cholangiocarcinomas and related high-risk conditions, are available for this research, which ultimately is aimed at establishing novel diagnostic and therapeutic strategies for a cancer for which there is presently no effective treatment. Candidates should be highly motivated and possess a Ph.D. degree in molecular oncology, molecular carcinogenesis, cell and molecular biology, molecular toxicology, or related fields to qualify. Experience in mammalian cell culture, tumorigenesis assays, gene transfection, receptor-mediated signal transduction, and in such procedures as *in situ* hybridization and FISH, PCR and RT-PCR, recombinant DNA techniques, immunohistochemistry, and laser capture microdissection is highly desired. Salary is competitive and commensurate with experience and qualifications. Interested persons should apply by sending a letter of interest, complete curriculum vitae, copies of recent peer-reviewed publications, and letters of reference from four persons familiar with the candidate's qualifications and research experience to: **Dr. Alphonse E. Sirica, Professor and Division Chair, Division of Cellular and Molecular Pathogenesis, Department of Pathology, Medical College of Virginia Campus of Virginia Commonwealth University, P.O. Box 980297, Richmond, VA 23298-0297.** Telephone: 804-828-9549; FAX: 804-828-9749; e-mail: [asirica@hsc.vcu.edu](mailto:asirica@hsc.vcu.edu). *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, and persons of disability are encouraged to apply.*

**POSTDOCTORAL POSITIONS**  
Massachusetts General Hospital  
Transplantation Biology Research Center

Postdoctoral research positions available immediately to study the induction of immunological tolerance by genetic engineering of bone marrow in murine and primate models using gene therapy (see *Science* 281:1845). The overall goals of this research include defining minimal requirements for tolerance induction, using novel mutant mice generated in the laboratory to understand molecular mechanisms of T and B cell tolerance, developing methods to allow for efficient viral transduction of primate hematopoietic stem cells, examining the ability of novel viral gene delivery vehicles to infect stem cells, and developing novel methods to facilitate highly efficient transduction of stem cells. Individuals applying for these positions must have experience in immunology, molecular biology, virology, or transplantation biology. Please submit curriculum vitae, statement of research interests, and the names of three references to: **John Iacomini, Ph.D., Massachusetts General Hospital, Transplantation Biology Research Center, MGH-East, Building 149-5210 13th Street, Boston, MA 02129.** FAX: 617-724-9218.

**POSTDOCTORAL FELLOW IN  
DIABETES/OBESITY RESEARCH**  
Departments of Preventive  
Medicine and Physiology  
and Biophysics, University of  
Southern California, Los Angeles

To work on NIH study to examine pathophysiology of Type 2 diabetes in Hispanic adolescents. Expertise in hormonal and metabolic regulation. Fellows are encouraged and expected to develop independent projects. Contact: **Dr. Michael Goran; Telephone: 323-442-3027; e-mail: [goran@usc.edu](mailto:goran@usc.edu).**

## POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available for structural studies of antiviral drugs complexed with their target protein molecules in a collaborative project between Purdue University and ViroPharma, Incorporated (an Exton, Pennsylvania-based company focused on the discovery and development of novel antiviral drugs to treat human diseases). The work may include cloning and expression of the target proteins, crystallizations, and crystallographic analyses. The research will be conducted at Purdue University where the structural biology group includes 13 faculty and numerous other Postdoctoral Researchers and graduate students. Facilities include joint X-ray sources, a joint computer network, an excellent biology library, and easy access to the APS synchrotron in Chicago. Funding is provided by ViroPharma, Incorporated, and administered by Purdue University at a level equal to the new National Institutes of Health postdoctoral scale and will include \$5,000 for supplies and meeting attendance. Starting date is negotiable. Applicants should send their curriculum vitae, list of publications, and names and addresses of three references to: **Dr. Michael G. Rossmann, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907-1392. Telephone: 765-494-4911; FAX: 765-496-1189; e-mail: mgr@indiana.bio.purdue.edu.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS** in gene regulation and gene therapy are immediately available in the laboratories of **Drs. Harry Nick and Anupam Agarwal**. The goals of these NIH- and JDF-funded research programs are to study the molecular mechanisms underlying gene regulation as well as to develop gene therapy strategies for the genes manganese superoxide dismutase, cytoplasmic phospholipase A2, and heme oxygenase 1 as they relate to inflammatory lung and kidney diseases, spinal cord injury, and diabetes mellitus. Applicants should have a Ph.D. and experience in biochemical and molecular biology techniques. Previous experience in gene therapy strategies, chromatin structure analysis, *in vivo* footprinting, and promoter/reporter gene analysis is highly recommended. Positions include competitive salary (negotiable), fringe benefits, and the opportunity to work in a rapidly expanding interdisciplinary group. Please send curriculum vitae and the names of three references to: **Dr. Harry Nick, Department of Neuroscience, Box 100244, University of Florida, College of Medicine, Gainesville, FL 32610. E-mail: hnicks@ufl.edu.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** on an NIH-funded project to study structure and function relationships in amine oxidases that contain a covalently bound redox cofactor and belong to a recently recognized superfamily of prokaryotic and eukaryotic flavoenzymes (see website: [http://www.mcph.u.edu/medschool/depts/biochem/mj\\_res.htm](http://www.mcph.u.edu/medschool/depts/biochem/mj_res.htm)). Candidates should have a Ph.D. and strong background in biochemistry and molecular biology. Send curriculum vitae, summary of research experience, and the names and telephone numbers of three references to: **Dr. Marilyn Jorns, MCP Hahnemann School of Medicine, Department of Biochemistry, 2900 Queen Lane, Philadelphia, PA 19129. E-mail: marilyn.jorns@drexel.edu.**

**POSTDOCTORAL POSITION** in Boston is available immediately to study endothelial cell cycle regulation and angiogenesis. Candidates should have an M.D. or Ph.D. and a strong background in cellular and molecular biology. Please send curriculum vitae and three references to: **Douglas W. Losordo, M.D., Division of Cardiovascular Research, St. Elizabeth's Medical Center, Tufts University, 736 Cambridge Street, Boston, MA 02135. FAX: 617-789-5029.**

## GLOBAL OPPORTUNITIES

### DIRECTOR Institute of Atomic and Molecular Sciences Academia Sinica, Taipei, Taiwan

Applications are invited to fill the position of Director in the Institute of Atomic and Molecular Sciences (IAMS) at Academia Sinica, Taiwan. The initial appointment is for a period of three years, but it is renewable for a second term. The position will also carry the title of **RESEARCH FELLOW**.

IAMS is located on the campus of the National Taiwan University in cosmopolitan Taipei. Presently, the intellectual thrusts of the Institute span the following six research areas: molecular reaction dynamics, photochemistry and molecular spectroscopy, surface science, laser and optical spectroscopy, condensed matter science, and theoretical atomic/molecular sciences. The Institute is also in the midst of developing an international graduate program in molecular dynamics and spectroscopy as part of a cooperative venture between Academia Sinica and the National Taiwan University. For details about Academia Sinica and IAMS, please consult the following websites: <http://www.sinica.edu.tw/> and <http://www.iams.sinica.edu.tw/>.

IAMS is seeking an outstanding scholar with extensive experience in research management. The new Director is expected to have a distinguished research reputation in at least one of the intellectual thrust areas noted earlier and to pursue a vigorous research program in one of these or related fields. Resources will be available to reactivate the research program of the Director in IAMS. The Director is responsible for directing and coordinating the diverse research activities of the Institute to ensure maximum integration and synergy. In addition to managerial and administrative skills, the applicant should also exhibit strong leadership qualities with experience to motivate young Scientists toward the pursuit of excellence in scientific research.

The IAMS encourages applications and nominations from all sources by the closing date of June 30, 2001. Applications or nominations should include curriculum vitae together with a publication list and three letters of recommendation. Applicants should also provide a statement highlighting their vision for academic and research development of the Institute. Applications and nominations should be submitted to: **Dr. Sunney I. Chan, Vice President, Academia Sinica, Nankang, Taipei, 11529, Taiwan.** Only short-listed candidates will be notified.

### FACULTY POSITION National Taiwan Normal University

The Department of Biology invites application for a position in the rank of **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level starting February 2002. Candidates with discipline in biostatistics are invited to apply. Applicants must have Ph.D. degree and postdoctoral experience and commit to excellence in research. The appointee is expected to teach at both undergraduate and graduate level and conduct a vigorous research program. Applicants should send curriculum vitae with publication list; research plan; photocopies of diploma of the highest degree; and arrange for three reference letters before September 30, 2001, to: **Professor Shong Huang, Chairman, Department of Biology, National Taiwan Normal University, 88, Section 4, Ting-Chou Road, Taipei 117, Taiwan. FAX: 886-2-29312904; e-mail: biofv057@scc.ntnu.edu.tw.**

## WORKSHOPS

### THE I.D. OF STEM CELLS Redefining Stem Cell Identity and Plasticity for CNS Repair

The 2001 Route28 Workshop (August 23-30; Port Ludlow, Washington) will explore the plasticity of stem cells and their potential use in the treatment of CNS injury or disease. For more information and an application, visit: **Route28 Summits in Neurobiology**; website: [www.route28.org](http://www.route28.org).

## MARKETPLACE

### The World of Science Online

- Science Electronic Marketplace
- Science's Next Wave
- Science NOW
- Science Careers

**Science**

[www.scienceonline.org](http://www.scienceonline.org)

DNA (plasmid, PCR, BAC, genome, genotyping)

**SEQUENCING** special **\$15/RUN**  
**Overnight, High Quality**

800-214-7722, [CustomerService@ElimBiopharm.com](mailto:CustomerService@ElimBiopharm.com)

Circle No. 46 on Readers' Service Card

For BAC contigs building and comparative genomics

### The Day Screening

Several clones could be isolated within one day, using screening kits and plates without isotope.

**Advanced GenoTechs Co**

[www.geno-gtac.co.jp](http://www.geno-gtac.co.jp) FAX: +81-298-49-2567

Circle No. 43 on Readers' Service Card

### BAC End Sequencing! Bio S&T Inc.

High accuracy  
Only TINY amount of  
DNA required!

Custom BAC Libraries  
Pre-made BAC Libraries avail.

New: **HandyGun™ T4 Ligase** Ready to use! Dry! Stable!

Web: [www.biost.com](http://www.biost.com)  
Fax: 514-633-6011

**888-368-8368**

Circle No. 52 on Readers' Service Card

### Genome & EST Sequencing

#### FROM 0.6 CENT/BASE PAIR

Full Service High Throughput Sequencing,  
Annotation, Reconstruction and Bioinformatic  
Services From

#### INTEGRATED GENOMICS, INC.

312-491-0846 - [www.integratedgenomics.com](http://www.integratedgenomics.com)

Circle No. 45 on Readers' Service Card

### Be First - Go Custom!

### CUSTOM PEPTIDE & ANTIBODY PRODUCTION

- Leading manufacturer of phosphospecific antibodies
- Unsurpassed technical support

**800-435-2080**

On-line: [peptide@biosource.com](mailto:peptide@biosource.com)

[biosource.com](http://biosource.com)

Circle No. 42 on Readers' Service Card

MARKETPLACE



**MORE PRODUCTS  
ON PREVIOUS PAGE**

**NEW  
LOW  
PRICES**

**VOLUME DNA SEQUENCING  
CALL (800) 720-GENE**

- HIGH-THROUGHPUT  
GENOME SEQUENCING
- NO ROYALTIES  
OR LICENSE FEES
- SHOTGUN SEQUENCING  
EXPERTISE
- LARGE & SMALL  
PROJECTS ACCEPTED

**seqwright** (713) 528-4363 PHONE  
(713) 528-6232 FAX  
www.seqwright.com  
email: seq@bikbox.com

Circle No. 50 on Readers' Service Card

# Customized Project Support

CBI is your source for complete R&D project support, including all peptide, protein, DNA and molecular biological technologies. For a free consultation or a quote, call 1-800-735-9224 or email info@cbi-biotech.com.

**COMMONWEALTH  
BIOTECHNOLOGIES, INC.**  
*From Concept to Clinic*  
601 Biotech Drive · Richmond, VA 23235  
1-800-735-9224 · www.cbi-biotech.com

Circle No. 60 on Readers' Service Card

**Widely  
Recognized  
Original &  
Guaranteed**

**KlenTaq1** **8¢/u**  
Truncated  
Taq DNA  
Polymerase  
Witstand 99°C

US Pat # 5,436,149

Call: **Ab Peptides** 1-800-383-3362  
Fax: 314-968-8988 www.abpeps.com

Circle No. 51 on Readers' Service Card

**Custom BAC Library Construction**

BAC End Sequencing  
Inexpensive DNA Sequencing  
Custom cDNA Libraries  
DNA Subcloning  
Protein Expression

Amplicon Express  
Toll Free 1-877-332-8080  
Phone 1-509-332-8080  
www.genomex.com  
koford@genomex.com

Circle No. 44 on Readers' Service Card

**Premier Specialty DNA Synthesis**

Molecular Beacons, RNA,  
Antisense Oligos, Dual-Labeled  
Fluorescent Probes & More.

**IDT** www.idtdna.com  
1-800-328-2661

Circle No. 54 on Readers' Service Card

MARKETPLACE

## Custom Peptides & Antibodies

**Best Service & Price! Compare and Save!**

Alpha Diagnostic (800) 786-5777

Fax (210) 561-9544; info@4adi.com

Web site: http://www.4adi.com

Circle No. 49 on Readers' Service Card

## QUALITY DNA SYNTHESIS

**MALDI-TOF Mass Spectrometry Quality Control**

Fluorescent Dyes & Other Modifications  
Gene Construction & Sequencing Services  
Custom RNA Oligos & Antisense DNA Oligos  
Custom Primers for PCR & Sequencing  
Long Oligos (up to 150-mers)  
**Competitive Pricing**

**MIDLAND**

The Midland Certified Reagent Company

1-800-247-8766 • FAX: 1-800-359-5789

www.mcrc.com • email: mcrc@oligos.com

Circle No. 56 on Readers' Service Card

**3 O.D. Select Oligos**

**NEW LOW PRICE**

**Just \$0.45/base\***

Order through our Web site and we'll ship your 3 O.D. Select oligos in just 24-48 hours. Every oligo is QC'd by PAGE analysis, and each batch is performance-tested by mass spec.

\*Desalted only. Oligos must be 10 to 35 bases in length. No modifications or additional purification. Web orders only. Offer valid in U.S. only.

**SIGMA  
GENOSYS**

North America: 1-877-710-1504 • email: gorderentry@sial.com

Circle No. 58 on Readers' Service Card

**CUSTOM PEPTIDES**

**QUICK QUOTE**  
MOST QUOTES IN AN HOUR

**FAST DELIVERY**  
2 WEEKS FOR MOST ORDERS  
100% SATISFACTION GUARANTEED

**...MADE EASY!**

**NEW ENGLAND  
PEPTIDE, INC.**  
Tel: 888-343-5974

Fax: 978-343-5940 www.newenglandpeptide.com

Circle No. 53 on Readers' Service Card

**MERLIN® Custom Services**

**Plasmid Purification**

Starting at \$59/1 mg\*  
Endotoxin Removal, Cloning,  
Research or cGMP Grade  
\*minimum of 5 mgs

**Q-BIOGENE**  
1-800-4-PLASMID • www.qbiogene.com

Circle No. 59 on Readers' Service Card

MARKETPLACE

BIOOSYNTHESIS, INC.

## PEPTIDES, OLIGOS ANTIBODIES

800-227-0627 www.biosyn.com

Circle No. 55 on Readers' Service Card

## Quality Peptides & Antisera

*Friendly, Personal Service*  
www.genosys.com

### Custom Peptide Synthesis

- sequence analysis
- IG, >70%, >80%, >95% purity
- scales from 2 mg-l g
- synthesis up to 120 residues
- variety of modifications available
- mass spec & HPLC on every peptide
- satisfaction guaranteed

### Polyclonal Antisera Service

- antigen design assistance
- synthesis, conjugation and sera collection
- flexible protocol

**SIGMA  
GENOSYS**

North America  
1-877-710-1502  
ginformation@sial.com

Europe  
(+44) (0) 1223 839000  
info@sigma-genosys.co.uk

Circle No. 57 on Readers' Service Card

DNA	PEPTIDES
Free Set-up and Desalting	Call and Compare
<b>Gene Synthesis, Site Mutagenesis, Protein Expression and more</b>	
<b>COMPARE AND SAVE</b>	
<b>DNA Sequencing:</b> as low as \$15 per run	
<b>Custom Anti-peptide Antibody</b> (including peptide synthesis) <b>\$850</b>	
<b>GENEMED SYNTHESIS</b> 800.344.5337 Fax: 650.952.9540 Web Site: www.genemedsyn.com	

Circle No. 47 on Readers' Service Card

**Antibodies That Answer!**  
Great Zymed Performance, Dependability, Support.  
Including The Best Antibody To...

**Phosphoserine**

**ZYMED LABORATORIES INC.** www.zymed.com  
1-800-874-4494

Circle No. 41 on Readers' Service Card

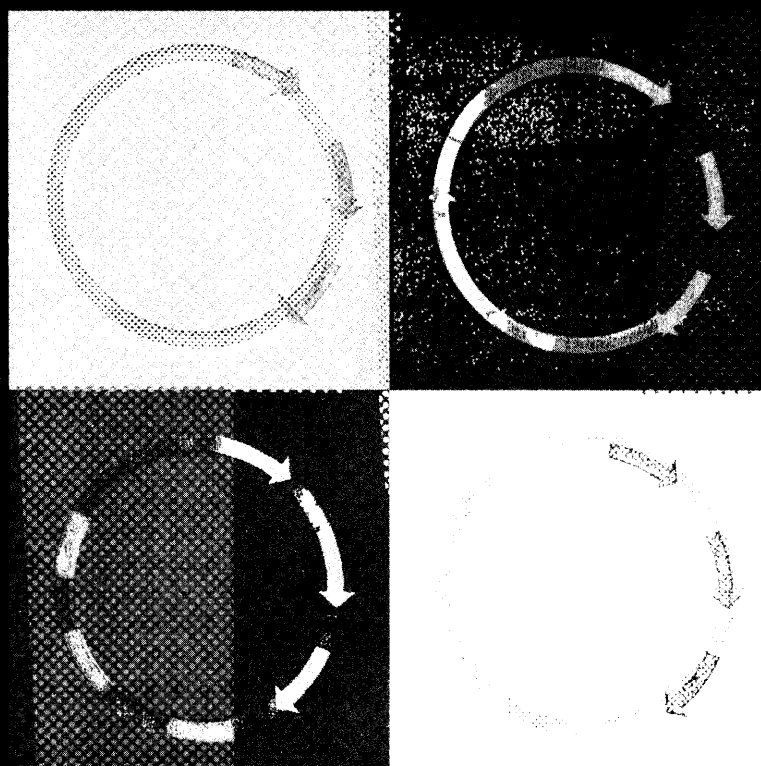
**Express Peptides**

20mg in 5 days  
(10-20 mers)

**ResGen**  
Invitrogen Corporation  
1-800-533-4363

Circle No. 48 on Readers' Service Card

GENE P



## gene expression

GeneOp® customized gene synthesis is a powerful tool for today's most advanced biotech applications. While a staff scientist can take six months or longer to synthesize a workable gene, GeneOp customized genes can be delivered in as fast as 20 days – dramatically enhancing your efficiency and business position.

In addition, the GeneOp bioinformatics team can dramatically improve your gene expression by eliminating rare codons and utilizing optimized codons for your host organism. We can even use "hybrid" codon tables derived from multiple species to produce optimized genes for several systems simultaneously.

**Visit our website or call Operon today for more information.**

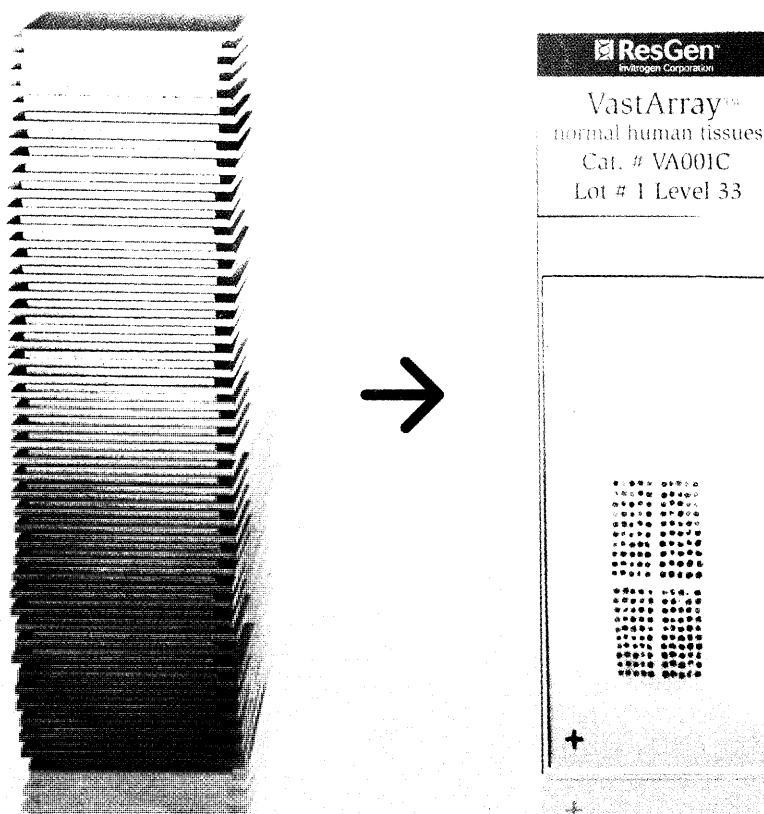
the *art* of Genomics™

Circle No. 32 on Readers' Service Card

NORTH AMERICA 800-688-2248 [dna@operon.com](mailto:dna@operon.com)  
EUROPE 00-800-OP-ORDERS [oligo@operon.com](mailto:oligo@operon.com)  
[www.operon.com](http://www.operon.com)



# One hundred tissue samples. One smart slide.



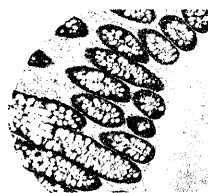
Why spend your time preparing tissue sections when you can spend it analyzing results with ResGen™ VastArray™ tissue arrays from Invitrogen?

**Smart, high-throughput format.** VastArray™ tissue arrays include up to one hundred 600 µm core tissue samples spotted in duplicate on a standard glass microscope slide. Choose from stock human or mouse arrays or have one custom-made for you. You'll screen up to 100 tissue samples in the time it takes to screen one.

**Rigorous quality control.** Pathologists screen VastArray™ tissues for quality and authenticity. Histologists select

optimum tissue cores—staining each with hematoxylin and eosin (H&E) to confirm morphology and position and immunostaining to ensure preservation of antigenic epitopes. Duplicate spotting and control spots verify the accuracy of your results.

**Time savings.** From protein expression studies and antibody screening to tissue specificity assays and mouse model analyses, one smart slide accelerates your research.



*Human colon immunostained with anti-CAM 5.2 antibody*

For details on ResGen™ VastArray™ tissue arrays, visit [www.resgen.com](http://www.resgen.com)

**ResGen™**  
Invitrogen Corporation

Circle No. 26 on Readers' Service Card

**United States:**  
ResGen™, Invitrogen Corporation  
2130 Memorial Parkway, SW  
Huntsville, AL 35801  
Tel (Toll Free): 800 533 4363  
Fax: 256 536 9016  
Email: [info@resgen.com](mailto:info@resgen.com)

**Europe:**  
Invitrogen Ltd  
3 Fountain Drive  
Inchinnan Business Park  
Paisley PA4 9RF, UK  
Tel (Free Phone Orders): 0800 269 210  
Tel (General Enquiries): 0800 5345 5345  
Fax: +44 (0) 141 814 6287  
Email: [eurotech@invitrogen.com](mailto:eurotech@invitrogen.com)

**International Offices:**  
Argentina 5411 4556 0844  
Australia 1 800 331 627  
Austria 0800 20 1087  
Belgium 0800 14894  
Brazil 0800 11 0575  
Canada 800 263 6236  
China 10 6849 2578  
Denmark 80 30 17 40

France 0800 23 20 79  
Germany 0800 083 0902  
Hong Kong 2407 8450  
India 11 577 3282  
Italy 02 98 22 201  
Japan 03 3663 7974  
The Netherlands 0800 099 3310  
New Zealand 0800 600 200  
Norway 00800 5456 5456

Spain & Portugal 900 181 461  
Sweden 020 26 34 52  
Switzerland 0800 848 800  
Taiwan 2 2651 6156  
UK 0800 838 380  
Other countries see our website

[www.resgen.com](http://www.resgen.com)