

# Four Essential Journals from the AACR

Priority reading for over 50 years -  
cited more than any other journal  
in its field

## CANCER RESEARCH

Vol. 57, 1997 (24 issues)  
ISSN 0008-5472

*Editor-in-Chief:*  
Carlo M. Croce, M.D.

- State-of-the-art laboratory and clinical investigations
- Advances in Brief
- Selected review articles

AACR members: \$90;  
Outside Americas: \$160  
Individual nonmembers: \$460;  
Outside U.S.: \$550

Institutions: \$685; Outside U.S.: \$815  
Institutional subscriptions include a subscription to *Clinical Cancer Research*. Available only as a combined subscription. *Proceedings of the AACR* is included in Individual nonmember and Institutional subscriptions to *Cancer Research*.

A major resource on the  
molecular biology of cancer

## CELL GROWTH & DIFFERENTIATION

Vol. 8, 1997 (12 issues)  
ISSN 1044-9523

*Editor-in-Chief:*  
George F. Vande Woude, Ph.D. (Until 12/31/96)  
Joseph R. Nevins, Ph.D. (Beginning 1/1/97)

- Original *in vitro* and *in vivo* studies of the molecular biology of cancer, including normal and abnormal cellular processes
- Research Capsules
- Viewpoints

AACR members: \$60;  
Outside Americas: \$90  
Individual nonmembers: \$105;  
Outside U.S.: \$145  
Institutions: \$280; Outside U.S.: \$320

An up-to-the-minute journal  
spanning three vital fields

## CANCER EPIDEMIOLOGY, BIOMARKERS & PREVENTION

Vol. 6, 1997 (12 issues)  
ISSN 1055-9965

*Editor-in-Chief:*  
Pelayo Correa, M.D.

- Original research on causes and prevention of cancer in humans
- Invited editorials
- Selected review articles
- Short communications
- Meeting reports

AACR members: \$55;  
Outside Americas: \$85  
Individual nonmembers: \$95;  
Outside U.S.: \$135  
Institutions: \$245; Outside U.S.: \$285

An exciting new forum for clinical  
and translational cancer research

## CLINICAL CANCER RESEARCH

Vol. 3, 1997 (12 issues)  
ISSN 1078-0432

*Editor-in-Chief:*  
John Mendelsohn, M.D.

- Research articles
- Advances in Brief
- Minireviews
- Controversies in Clinical Cancer Research

AACR members: \$50;  
Outside Americas: \$80  
Individual nonmembers: \$105;  
Outside U.S.: \$145  
Institutions: \$685; Outside U.S.: \$815

Institutional subscriptions include a subscription to *Cancer Research*. Available only as a combined subscription.

## ORDER TODAY!

Members, American Association  
for Cancer Research:

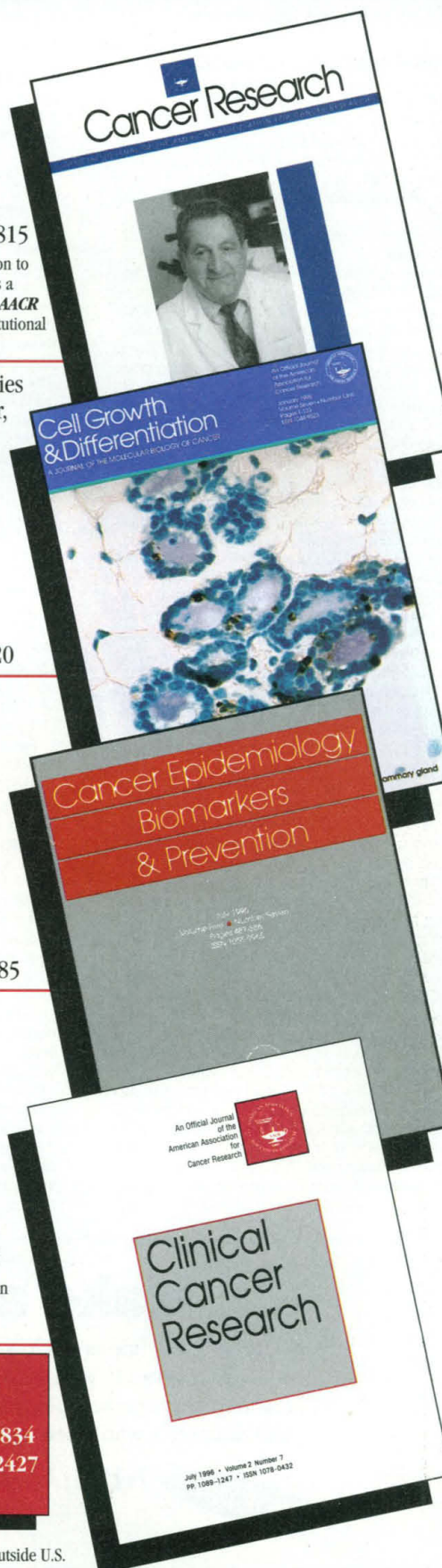
To place your order, contact the AACR at  
(215) 440-9300; FAX (215) 440-9313.

Members subscribing to any AACR journal automatically receive the *Proceedings of the AACR*.

Institutions: Purchase all four journals and save 15% off the total subscription price, excluding postage outside U.S.  
Canada: Add 7% GST to all orders. MD: Add state sales tax.

Nonmembers, contact:  
FULCO, Inc.

P.O. Box 3000, Denville, NJ 07834  
1-800-875-2997 or (201) 627-2427  
FAX (201) 627-5872





# Productivity = $IR^2$

## $IR^2$ - The New Formula for DNA Sequencing and Genetic Analysis

LI-COR's new  $IR^2$  System brings high productivity to your lab through the power of two-dye, infrared technology. High throughput. High accuracy. New approaches that save you time and money. It's all part of the  $IR^2$  equation.

### Up to 64 Samples

Whether you're just starting to automate or are running a genome project, there's an  $IR^2$  System to fit your needs. Our highest throughput system delivers over 100 kb of highly accurate sequence per day!

### Longer Reads, No Compromises

With an  $IR^2$  System, you don't have to sacrifice read lengths or accuracy to sequence more samples. Read lengths over 1000 bases with 99% accuracy are routine.

### Half the Reactions

A new sequencing approach called *Simultaneous Bi-directional Sequencing* (SBS™) saves you 50% on time and reagents. With SBS™, you sequence both directions on a template by combining forward and reverse primers in the same reaction. Twice the data from each reaction helps you complete your projects faster and easier.

### Rapid Gene Discovery

$IR^2$  Systems can run over 8500 genotypes per day, leading to faster gene discovery. High-sensitivity IR detection, advanced imaging, and our Gene ImagIR™ software provide a powerful solution for fragment analysis applications.

### The Infrared Advantage

Researchers around the world have discovered the long reads and high accuracy of LI-COR infrared systems. But high quality data is only part of the  $IR^2$  formula. Outstanding reliability, affordability and friendly technical support are also part of the equation.

Now there's a new formula for productivity!

**800-645-4267**

[www.licor.com](http://www.licor.com) • FAX: 402-467-0819

Europe: MWG Biotech

Phone: (49) 80 92/82 89-0 • FAX: (49) 80 92/2 10 84

Japan: Aloka Co. Ltd.

Phone: 81 (422) 45-5130 • FAX: 81 (422) 48-5886

Other Countries:

Consult our web site for worldwide representatives.

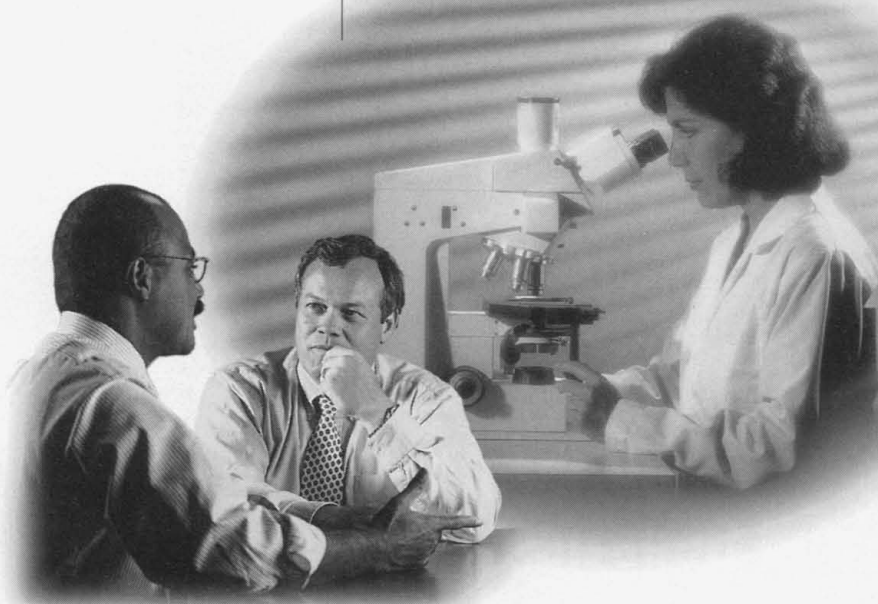


**LI-COR**  
BIOTECHNOLOGY DIVISION

Circle No. 55 on Readers' Service Card



# Yes, I'd Love To Buy A Zeiss. But Can I Afford It?



1846-1996  
Carl Zeiss

150  
Years  
Innovation in Optics

Yes, you can.

Not even our competition questions that Zeiss sets the standards for quality and performance in microscopy. It has been that way for 150 years.

What some scientists and engineers find surprising is that there is a superior Zeiss instrument to fit almost every budget.

Skeptical? Then try this **free** offer: Ask us to have your local Zeiss representative call you with a price quote on the microscope you're considering. No cost. No obligation. No big sales pitch.

But before you phone, know this: **We want your business and we're ready to do all we can to satisfy you. With quality, performance and price.**

Call **(800) 233-2343**. Or fax us at (914) 681-7446.

Zeiss. 150 Years of Precision. 150 Years of Value.



Carl Zeiss, Inc.  
Microscope Division  
One Zeiss Drive  
Thornwood, NY 10594  
E-mail: [micro@zeiss.com](mailto:micro@zeiss.com)  
<http://www.zeiss.com>

Circle No. 29 on Readers' Service Card

# ATCC, THE ONE SOURCE FOR



# Media

# Serum



# Cells

Life just got easier! One call...one order to ATCC brings you ATCC's authentic cell lines plus our own **Vitacell™** brand Media and Fetal Bovine Serum. The same media and serum ATCC uses to grow our own cell

lines. Thoroughly QC tested in our own labs. High purity, high reliability, high quality. That's the **Vitacell™** brand of media and serum from ATCC.

When your research validation is critical, order directly from ATCC.

Authentic, pure cell lines...and now, the same quality of media and serum. All from ATCC. The one source.



12301 Parklawn Drive, Rockville, MD 20852 • 1-800-638-6597 • Fax: 1-301-816-4361 • E-mail: [sales@atcc.org](mailto:sales@atcc.org)  
Circle No. 24 on Readers' Service Card

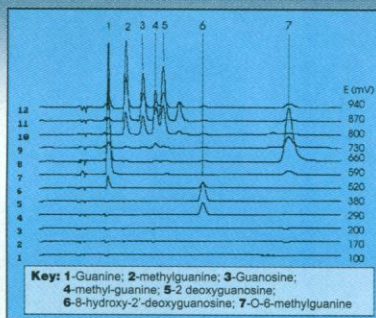




## DNA VANDALS!

When radicals meet DNA, the results can be shattering! But measuring ROS doesn't have to be.

ESA can help you study Reactive Oxygen Species' (ROS) role in neurological disorders, aging, cancer, apoptosis and more. With HPLC/coulometric detection you can monitor damage to DNA directly by measuring hydroxy guanine adducts, and determine free radical levels by the conversion of salicylate to DHBA.

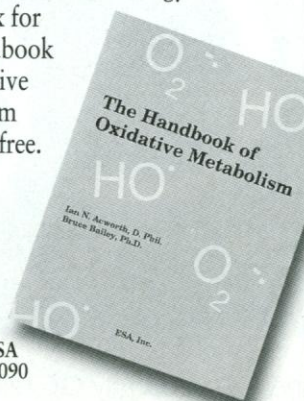


Analysis with ESA's Coulchem® and CoulArray™ systems is highly sensitive, fast, eliminates  $^{32}\text{P}$  and minimizes sample preparation.

So let ESA help you put it together, with the big picture on advanced ROS analytical methodology. Call or fax for The Handbook of Oxidative Metabolism today. It's free.



22 Alpha Road  
Chelmsford, MA 01824-4171 USA  
(508) 250-7000 Fax: (508) 250-7090  
<http://www.esainc.com>



## The Coolest Kids' Show on Radio, Now on Tape!

The Kinetic City Super Crew is a group of curious kids that travel the world in their express train to solve brain-teasing science mysteries!

Order a copy of the Super Crew's latest adventure "Concrete Jungle or The Case of the City Safari" and discover the wild side of the city.

To order, call toll-free  
**1-888-GET-CREW**

**\$8.95**  
plus \$4 s&h (per order)



Check out our Website for your local KCSC station, and for other cool Super Crew stuff.  
<http://www.aaas.org/EHR/KCsuper.html>

Circle No. 46 on Readers' Service Card

Kinetic City Super Crew is a production of the American Association for the Advancement of Science. Funding is provided by the National Science Foundation and support from other contributors.



## LOOKING FOR A CLINICAL OUTLET FOR YOUR ANTIBODY?

**We could help you.**

### **Drug Discovery Enterprises, Inc.**

DDE wants to license and develop antibodies (and other targeting moieties) that have therapeutic potential - these include well-characterized antibodies, such as antibodies to CD30, the c-erbB family, mucins, carbohydrates, etc., and other novel antibodies that react specifically and selectively with the surface of any cancer cell.

**In addition to licensing your antibody, research and collaborative support is possible to help develop and characterize antibodies, from classical hybridomas to phage displayed recombinant antibodies.**

DDE designs and develops novel drugs to treat cancer using antibody targeting and has introduced several antibody conjugates into clinical trials.

Please send a brief description of your antibody and its specificity, current licensing and development status, and contact information to **Dr. L.L. Houston, Drug Discovery Enterprises, Inc., PO Box 2802, Del Mar, CA 92014-5802 (e-mail llh@cts.com)**

Circle No. 54 on Readers' Service Card

## Journal of **Biomedical Science**

**Now bimonthly!**  
New low rates: only \$ 30.00  
for personal subscribers!

A rapidly developing interdisciplinary journal, with a global perspective on basic and clinical biomedical research, *Journal of Biomedical Science* is guided by an outstanding editorial board with editors on three continents and is widely distributed in Asia, Europe, and the Americas. The journal invites the submission of papers on significant original research and of current review articles. All manuscripts are stringently peer-reviewed. There is no page charge for publication.

For a complete listing of new contributions, instructions to authors and editorial board members, log on to: <http://www.karger.ch/journals/jbs/jbsdes.htm>

Please direct your submission  
and any inquiries to:

Dr. C.C. Chang  
Room 1701, 106 Ho-ping East Road, Sec. 2  
Taipei 106, Taiwan (ROC)  
Tel. +886 2 737-7594  
Fax +886 2 737-7248  
E-mail: tiyang@nsc.gov.tw

**KARGER**

For subscriptions and free  
sample copies, please contact:

S. Karger AG  
P.O. Box  
CH-4009 Basel (Switzerland)  
Fax +41 61 306 12 34  
E-mail: karger@karger.ch  
<http://www.karger.ch>

Circle No. 32 on Readers' Service Card

Photo: ©David Madison, The Image Bank

## Overcome Barriers with Ease and Precision *Dynabeads® M-280 Streptavidin*

### Reaching new heights in fast and efficient DNA & RNA isolation and analysis

#### **HYBRIDIZE BIOTINYLATED NUCLEIC ACIDS**

- Capture and purify cDNA, dsDNA and RNA in minutes while achieving increased sensitivity and efficiency
- Provide up to 100,000 fold enrichment of low abundance cDNA with minimal background (Morgan et al.)

#### **DNA & RNA BINDING PROTEIN PURIFICATION**

- Isolate homogeneous transcription factors in less than one hour
- Proteins are fully active in transcription and DNA/RNA binding assays

#### **SOLID PHASE DNA SEQUENCING - CLEAN UP YOUR RESULTS**

- Generate purified dye terminator sequencing product directly from a crude PCR product in 10 minutes
- Eliminate time consuming subcloning, precipitation, extraction & centrifugation steps during template preparation
- Can be used with all available manual and automated sequencing chemistries

**Now...Immobilize large biotinylated fragments  
with our new Dynabeads® kilobaseBINDER™ Kit**

*Dynabeads® M-280 Streptavidin are uniform, superparamagnetic polystyrene beads covalently coupled with streptavidin. Biotin labeled targets (DNA, RNA, proteins, cells) are first captured by the Dynabeads and then separated from your sample with a Dynal MPC® magnet. Target molecules and cells isolated with Dynabeads can be used in all downstream applications.*

Proven performance with over 400 references.  
Ask to see a reference on your specific application.  
Circle No. 41 on Readers' Service Card

**DYNAL®**

**Call: 1-800-638-9416**

5 Delaware Drive • Lake Success, NY 11042  
Fax (516) 326-3298 • Email [techserv@dynalusa.attmail.com](mailto:techserv@dynalusa.attmail.com)





# To be perfectly blunt...

## Our Blunt Vector Kits work better. Faster. Period.

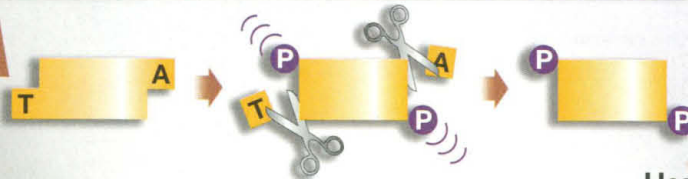
### PCR\* Reaction

"Soup" of PCR Products  
with Heterogeneous Termini



Typical PCR conditions<sup>†</sup> generate a mixture of products with heterogeneous termini.<sup>1,2</sup> This heterogeneity results in difficulty ligating PCR products to either blunt or dT-tailed vectors<sup>3</sup> for cloning purposes. Novagen's new **pT7Blue**, **pT7Blue-2**, and **pT7Blue-3 Perfectly Blunt™ Cloning Kits** simplify cloning of any DNA fragment regardless of composition or condition of 3' termini; blunt ends, 3' overhangs, or ragged ends ligate with equal ease and greater cloning efficiency (3-fold to 24-fold higher). The kits contain everything needed for end conversion, ligation, and transformation.

### End Conversion Reaction



Heat Inactivation  
(10 minutes)

### Advantages of using our Perfectly Blunt Cloning Kits

- Superior PCR product cloning efficiencies
- Streamlined procedure: fast, easy, one tube
- Compatible with PCR products generated by proofreading polymerases (e.g., *Pfu*)
- Independent of 3'-dA addition
- No addition of exogenous sequences to PCR primers
- No restriction enzyme digestion

#### References

1. Brownstein, J.M., et al. (1996) *BioTechniques* **20**, 1004-1010.
2. Magnuson, V.L., et al. (1996) *BioTechniques* **21**, 700-709.
3. Novy, R.E., Yaeger, K.W., and Kolb, K.M. (1996) *InNovations* **6**, 7-11.

\*The Polymerase Chain Reaction (PCR) process is covered by patents owned by Hoffmann-La Roche.

<sup>†</sup>Conditions that use DNA polymerases lacking 3'→5' exo-activity (e.g., *Taq*, *Tth*)

### Carry your H<sub>2</sub>O in style!

Receive a free Specialized® **Water Bottle** with the purchase of any Perfectly Blunt Cloning Kit before May 31, 1997.  
Offer good while supplies last.

### Homogeneous Product, Blunt and Phosphorylated

#### Ligation Reaction



Insert is combined with ready-to-use vector and ligated (1-2 hours). Subsequent transformation into NovaBlue Competent Cells generates recombinant colonies that are visualized easily by blue/white screening.  
**pT7Blue**, **pT7Blue-2** and **pT7Blue-3** are general cloning vectors; **pT7Blue-2** is optimized for *in vitro* transcription and translation.



USA & Canada

**Novagen**

601 Science Drive  
Madison, WI 53711 **800-526-7319**

Fax: 608-238-1388 • Tech Support: 800-207-0144 • e-mail: novatech@novagen.com • <http://www.novagen.com>

Circle No. 62 on Readers' Service Card

#### International Distributors

Asian Pacific (except Japan, Korea) • PROTECH 886-2-3810844 •  
Australia • Progen Industries Ltd. 7-3375-1888 • Denmark •  
Struers KEBO Lab 43-86-87-88 • Finland • KEBO Lab 9-804-551 •  
Japan • Takara Shuzo Co., Ltd. 775-43-7231 • Korea • BOHAN  
Biomedical 2-577-2002 • LRS Laboratories 2-924-8697 • New Zealand •  
Intermed Scientific Ltd. 9-443-1284 • Norway • KEBO Lab 22-90-00-90 •  
Sweden • KEBO Lab 8-621-34-00 • Taiwan • PROTECH 2-3810844 •  
Western Australia • Highlander Diagnostics Australia 9-224-4946

#### UK & Europe

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

#### Germany

R&D Systems GmbH  
Borsigstraße 7  
65205 Wiesbaden, Germany  
Tel: 49 (0) 6122 90980  
Fax: 49 (0) 6122 909819

#### International Freephone Numbers

Austria: 0 660 7567 • Belgique/Belgien: 0800 10 468  
Denmark: 80 01 85 92 • Deutschland: 0130 11 01 69  
France: 0800 90 72 49 • Nederland: 060 225607  
Norway: 800 11033 • Sverige: 020 29 31 49  
Switzerland: 0800 55 2462

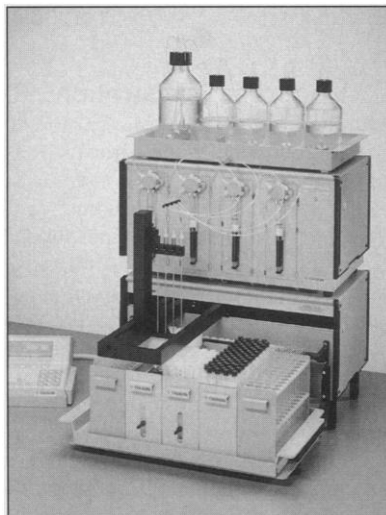
**ingenius**



# PRODUCTS & MATERIALS

## Technical Plotting and Data Software

PSI-Plot version 5 for Windows is a software package for technical plotting and data processing that includes 30 new features. The new features include an algebraic equation solver, difference equation solver, matrix manipulation and eigen system, nonlinear user-defined fitting with weighting factors, numerical integration of user-specified function, and many others. Several new plot types and plot editing capabilities have been added. The new version provides a comprehensive data sheet that performs data transformation, data interpolation and curve fitting, numerical integration and differentiation, experimental model development, digital signal processing, matrix manipulation, and commonly used statistical analyses ( $t$  test,  $f$  test, and regression). Data can be exchanged to and from most popular file formats, including Lotus 1-2-3, dBase, Quattro Pro, DIF, Microsoft Excel, and ASCII. **Poly Software International.** For information call 801-485-0466 or circle 140 on the reader service card.



single batch for purification in combinatorial chemistry, liquid chromatography-mass spectrometry, and gas chromatography. The system features a four-probe Cartesian arm to process four samples in parallel with identical treatment. If an SPE protocol requires about 10 min, the ASPEC XL4 can process 25 samples per hour. Manual protocols can be easily transferred to the system. The system accepts both 1-ml and 3-ml standard SPE columns and can accommodate nine solvents and four different sizes of sample vial. The instrument can automatically transfer the extract to open or sealed autoinjector vials for further analysis. It can also be used for mixed mode SPE and for automating sample pretreatment. **Gilson.** For information call 800-445-7661 or circle 142 on the reader service card.

## Polyacrylamide Gel

PAGEMate Re-gel is a versatile, premade polyacrylamide gel that has a shelf life of more than a year at room temperature. It regenerates easily in any buffer gel solution and performs as well as a freshly made gel. It provides an economical means of carrying out polyacrylamide gel electrophoresis without dealing with hazardous material. **Essex Research.** For information call 800-898-7475 or circle 141 on the reader service card.

## Automated Solid-Phase Extraction

The ASPEC XL4 System is an off-line, high-capacity solid-phase extraction (SPE) system that can handle up to 108 samples in a

## DNA Extraction from Soft Tissues

The Nucleon ST kit provides a straightforward protocol for rapid, high molecular weight DNA extraction from those tissue samples that are easily homogenized in lysis and buffer and do not require a Proteinase K digestion (such as liver, heart, brain, kidney, spleen, intestine, lung, and muscle). The kit

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

# StatView®

has quickly become the statistical product of choice."

PC Magazine, October 22, 1996

"... if you have been looking for a rapid and painless way to perform statistical analysis you need look no further. Try StatView once, and you will never look back."

Computer Shopper, September 1996

**StatView = easy stats. Seriously.**

Abacus Concepts has been developing best-selling, easy-to-use statistical software for the Macintosh for over ten years. Now available for Windows, StatView is used by over 75,000 scientists and researchers worldwide.

Don't just take our word for it; reviewers agree, too. And StatView has received more awards from the Macintosh press than any other statistics package available—a six-time Macworld World Class award winner, 1996 World Class finalist, MacUser Editors' Choice award winner and 1995 Editors' Choice finalist.

Try StatView yourself. We think you will agree—StatView *really* does mean seriously easy statistics.

Visit our website at <http://www.abacus.com> or call 1.800.666.STAT for more information!

Circle No. 40 on Readers' Service Card



Abacus Concepts, Inc. • E-mail: [info@abacus.com](mailto:info@abacus.com)  
1918 Bonita Avenue, Berkeley, CA 94704  
Phone: 1.510.540.1949 • Fax: 1.510.540.0260



StatView runs under Windows '95, Windows 3.1, Windows NT and is available for Macintosh and Power Macs. We have translated and student versions of StatView and license, academic and quantity discounts.



provides high yields of pure DNA suitable for restriction fragment length polymorphism and polymerase chain reaction techniques. **Vector Laboratories.** For information call 415-697-3600 or circle 143 on the reader service card.

### Fusion Protein Expression

The PINK Expression System allows production of visible fusion protein in *Escherichia coli*. The PINK Vectors encode an NH<sub>2</sub>-terminal tag, cytochrome b5, that confers a pink color on fusion proteins. This color makes it easy to track the protein of interest during isolation and purification. A simple, specific spectrophotometric measurement can quantitate the amount of protein produced. **R&D Systems Europe.** For information call +44 (0) 1235 551100 or circle 144 on the reader service card.

### Photomicrographic Camera System

The Leica MPS30-Photoautomat Camera is an economically priced photomicrographic camera system for virtually all Leica compound microscopes, stereomicroscopes, and macroscopes. The unit makes routine

photomicrography easy and reliable, and almost all functions are automatic. There is no need for complicated settings and calculations, and the chance of improper exposure is nearly eliminated. State-of-the-art electronic components and processing software ensure correct exposures, proper speed, and the efficient use of film. **Leica.** For information call 800-248-0123 or circle 145 on the reader service card.

### Liposome Preparation

The Sialomed Liposomat is for the preparation of reproducible, homogeneous in size, unilamellar, and stable liposomes in volumes of 3 to 100 ml. The liposomes can be prepared with virtually any lipid, and desired biomolecules can be encapsulated and coated on liposomes. The Liposomat has two serpentine channels, superimposed on each other and separated by a membrane. Each channel has a volume of 3 ml and a length of 3 m. Mixed lipid/detergent micelles are run in one of the channels and the buffer is run in the other. Because the dialysis is controlled and the serpentine channels provide a high surface area, stable liposomes can be made in as little as 30 min. **Sialomed.** For information call 410-997-0100 or circle 146 on the reader service card.

### Microplate Scanning Spectrophotometer

The PowerWave 200 is a dual-beam, microplate-scanning spectrophotometer. It has a wavelength range from 200 through 800 nm in which single wavelengths can be selected. The flexible scanning feature allows the user to scan a single well, a row, or an entire plate. Applications include en-



zyme-linked immunosorbent assay, RNA and DNA measurement and purity analysis, protein determinations, and any requirement for high-volume screening of known and unknown compounds. **Bio-Tek Instruments.** For information call 802-655-4040 or circle 147 on the reader service card.

### Literature

*Life Science Products* is a brochure covering such products as the TopCount system for 384-well microplate reading, the Cyclone personal storage phosphor system, LucLite long-life "glow" luminescent reagents, liquid handling systems, flow scintillation analyzers, gamma counters, and scintillation cocktails. **Packard Instrument.** For information call 800-323-1891 or circle 148 on the reader service card.

*The J.T. Baker Catalog 1997/98* features more than 4000 laboratory chemicals, analytical reagents, and safety products. The 450-page publication contains specifications, applications, and references for use in the analytical, environmental, and biotechnology laboratory. **J.T. Baker.** For information call 800-582-2537 or circle 149 on the reader service card.

*Protector VS Ventilation Stations* is a brochure on an enclosure designed to contain hazardous or noxious fumes, vapors, and fine powders, thus protecting the operator. Applications include use as a weighing station, solvent-cleaning work bay, light-duty fume hood, science classroom workstation, and veterinary and cytology procedure station. **Labconco.** For information call 800-821-5525 or circle 150 on the reader service card.

# PFANSTIEHL

## Look to us for building blocks for pharmaceutical chemistry.

This capability starts with our basic product line of blocked sugars, nucleosides, and a broad range of carbohydrates for the life sciences and key intermediates for anti-viral R&D. We are also leaders in the production of ultra high purity, low endotoxin sugars for critical applications, such as tissue culture work and fermentation. In the life sciences, we've got the blocks to build on. Request information.

### PFANSTIEHL LABORATORIES, INC.

*The source for carbohydrate chemistry*

1219 Glen Rock Avenue / Waukegan, IL 60085-0439  
847/623-0370 • Toll Free: 1-800/383-0126 • FAX: 847/623-9173  
International: Pfanstiehl (Europe) Ltd.  
+44 (0) 1606.331825 • FAX: +44 (0) 1606.331826  
<http://www.pfanstiehl.com> e-mail: [info@pfanstiehl.com](mailto:info@pfanstiehl.com)



P5

# MAKING THINGS WORK

Circle No. 66 on Readers' Service Card



## PERSONAL BIBLIOGRAPHIC DATABASES...

*These cost more:*

ENDNOTE • PRO-CITE • REFERENCE MANAGER

*This does more:*

# PAPYRUS™

VERSION 7.0.14

- Manages up to 2 million reference citations. Stores up to 16,000 characters and 100 keywords per reference.
- Dozens of predefined output formats, plus the ability to easily design your own.
- 100% compatible with WordPerfect, Microsoft Word, Ami Pro, and other DOS and Windows® word processors.
- Fast, powerful search capabilities.
- Able to import references from national databases, CD-ROM files, monthly diskette services, other bibliography programs, or almost any other database or text file.
- Allows an unlimited number of notecards for each reference.
- DOS version, fully compatible with Windows 3.x, Windows 95, Windows NT, and OS/2.

Beta version for Macintosh available from our Web site.

**Research**  
SOFTWARE DESIGN

2718 SW Kelly Street, Suite 181  
Portland, OR 97201

(503) 796-1368 FAX: 503-241-4260  
sales@rsd.com www.rsd.com/~rsd/

### Complete System \$99

Full money-back guarantee on purchase of Complete System.

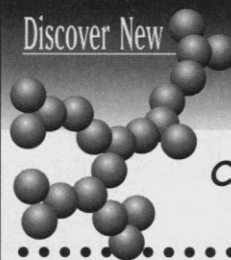
### Demo System \$25

Demo price credited toward subsequent Complete System purchase.

Outside North America, add \$20 shipping charge - U.S. funds, on a U.S. bank.

Circle No. 53 on Readers' Service Card

## Discover New Effective Drugs For Human Cancer



*The Most Direct Route to the Clinic for your Candidate Cancer Drug is via MetaMouse®*

- Small molecule, protein & gene drug evaluation/development.
- The *only* clinically relevant mouse model of cancer.
- Same-organ *human* tumor transplantation to nudes or SCIDs.
- Evaluate *real* human tumors for response.
- Metastasis/Angiogenesis/Apoptosis/Growth/Invasion.
- Contract drug evaluation on all tumor models available or ship.

#### Examples of MetaMouse drug-discovery/development "HITS"

An, Z. et al. *Clinical and Experimental Metastasis*, 15, 184-195, 1997.  
An, Z. et al. *Anticancer Research*, 16, 2546-2552, 1996.  
Wang, X. et al. *Cancer Research*, 54, 4726-28 1994.  
Holzman, D. *Journal of the National Cancer Institute* 88, 396-397, 1996.  
Hoffman, R., J. *Cellular biochem*, 56, 1-4, 1994.

# METAMOUSE®

*"The gold standard in cancer drug discovery/development"*  
US Patent 5,491,284 and 5,569,812

Tel-(800) 511-2555 • Tel-(619) 654-2555 • Fax-(619) 268-4175 • E-Mail-all@anticancer.com  
USA/Canada http://www.anticancer.com

7917 Ostrow Street **ANTICANCER INCORPORATED** San Diego, CA 92111, USA

Circle No. 59 on Readers' Service Card

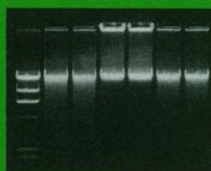
# MRC Reagents For GENOMIC DNA ISOLATION

**FAST**  
complete in  
about 30 minutes

Setting a new standard of simplicity and effectiveness in the isolation of high quality genomic DNA. No enzymatic treatments! No columns! No prolonged incubations! Non-toxic! (patent pending)

### HIGH QUALITY DNA

rat human pepper  
liver blood leaves



### DNAzol®

- for cells and tissues
- Isolates apoptotic DNA fragments.

### DNAzol® BD

- for whole blood

### DNAzol® ES

- for plants

**MRC**

MOLECULAR RESEARCH CENTER, INC

5645 Montgomery Rd.  
Cincinnati, OH 45212

Phone: 513-841-0900  
888-841-0900

Fax: 513-841-0080

E-mail: info@mrcgene.com

#### Isolated DNA is ready for:

- Southern blotting
- restriction analysis/RFLP
- PCR
- molecular cloning
- other molecular biology applications

#### ECONOMICAL

- Use 1ml of reagent with
- 10<sup>7</sup> cells
- 25-50mg animal tissue
- 300mg plant
- 300µl whole blood

Visit our website at:  
http://www.mrcgene.com

Austria: 43-1-292-3527 Australia: 1-800-631-093 France: 33-3-88-180722 Germany: 49-6227-51308, 49-6172-22073  
Hong Kong: 852-275-77569 India: 91-11-6425156 Israel: 972-8-947-2563 Italy: 39-2-2640274 Japan: 81-3-5632-9605  
South Korea: 822-294-6411 Switzerland: 41-41-420-9636 Taiwan: 886-2-7418169 United Kingdom: 44-993-706736

Circle No. 18 on Readers' Service Card



# In situ hybridization has a new look.

For fast, sensitive in situ hybridization, look into the DAKO GenPoint™ system. DAKO GenPoint is a new in situ hybridization detection system based on catalyzed signal amplification for nucleic acid sequences. DAKO GenPoint has all the sensitivity you need to detect rare targets—but without all the

trouble and expense of other methods. In fact, you don't need a thermal cycler. The DAKO GenPoint system detects even single copies of a target sequence with a simple manual procedure that gives you same-day results.

So, take a look at DAKO GenPoint, and discover fast, sensitive in situ hybridization. For information, call 800-424-0021.



**DAKO**

Greater value through innovation.

For a free calendar, call 800-424-0021, or visit our web site at <http://www.dakousa.com>.

DAKO is a registered trademark of DAKO A/S.  
DAKO GenPoint is a trademark of DAKO Corporation.  
©1997 DAKO Corporation, USA

**Australia**  
ACN 067-225-950

FREECALL:  
1800-653-103

**Austria**  
06-60-71-53

**Canada**  
800-387-8257

**Denmark**  
45-44-85-95-00  
<http://www.dako.com>

**France**  
1-30-50-00-50

**Germany**  
040-69-69-47-0

**Italy**  
02-50-60-211

**Japan**  
75-211-3655

**Spain**  
93-499-05-06

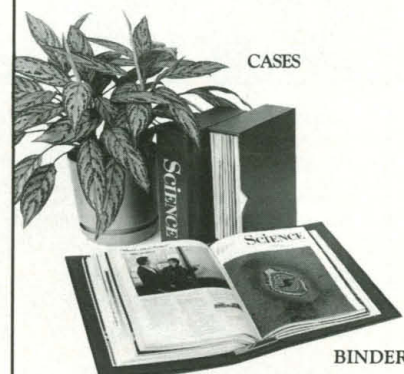
**Sweden**  
08-99-60-00

**Switzerland**  
041-760-11-66

**United Kingdom**  
01494-452016

**United States**  
800-424-0021  
<http://www.dakousa.com>

## SAVE YOUR COPIES OF SCIENCE



These custom-made, imprinted cases and binders are ideal for protecting your valuable *Science* copies from damage. Each binder or case holds one volume of *Science*, or 13 weekly issues—order four binders or cases to hold a complete year of issues. Constructed from reinforced board and covered with durable, leather-like red material and stamped in gold, the cases are V-notched for easy access; binders have a special spring mechanism to hold individual rods which easily snap in.

Quantity	Cases	Binders
One	\$ 8.95	\$11.25
Three	\$24.95	\$31.85
Six	\$45.95	\$60.75

### SCIENCE

Jesse Jones Industries, Dept. 95-SCE  
499 East Erie Avenue  
Philadelphia, PA 19134

Enclosed is \$\_\_\_\_\_ for  
Cases: \_\_\_\_\_ Binders. Add 1.50 per  
case/binder for postage & handling.  
Outside USA \$3.50 per case/binder  
(US funds only). PA residents add 7%  
sales tax.

Print  
Name \_\_\_\_\_

Address \_\_\_\_\_

No P.O. Box Numbers Please

City \_\_\_\_\_

State/Zip \_\_\_\_\_

CHARGE ORDERS (Minimum \$15): Am  
Ex, Visa, MC, DC accepted. Send card  
name, #, Exp. date.

CALL TOLL FREE 7 days, 24 hours

1-800-825-6690

Outside the US call 215-425-6600  
Allow 4-6 weeks for delivery

**SATISFACTION GUARANTEED**

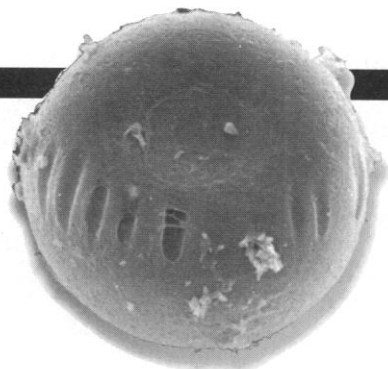
Circle No. 26 on Readers' Service Card



# NEW

See us at ASCB  
Booth #538

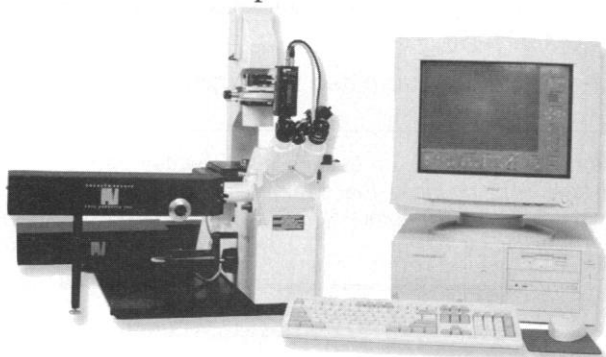
Control your cellular  
world with an  
optical trapping  
workstation from  
Cell Robotics...



The ideal multi-user  
platform for performing  
cell micromanipulations  
and microdissections.

The Cell Robotics Workstation combines the accuracy and precision of the LaserTweezers®, LaserScissors™ and CellSelector™ into a fully integrated workstation for:

- Cell/cell interactions and neural networking
- Microdissection and cell fusion
- Single cell isolation
- Laser-assisted reproduction research



**CELL  
ROBOTICS  
INC.**

Cell Robotics, Inc.  
2715 Broadbent Pkwy. NE  
Albuquerque, NM 87107  
800-846-0590  
505-343-1131 Ext. 247  
Fax 505-344-8112  
<http://www.cellrobotics.com/cell>  
email: [crii@cellrobotics.com](mailto:crii@cellrobotics.com)

## A *SCIENCE* Online Career Workshop INDUSTRIAL CAREERS IN TOXICOLOGY

15 April 1997

*Join John Timpane, Ph.D.  
and his guest,  
John Keller, Ph.D.,*

as they discuss the past, present, and future of industrial careers in toxicology. Get "inside information" from a scientist at the forefront of this exciting specialty. Learn what it takes to thrive in this competitive industry, and what skills you'll need to start on the path to success. Drs. Timpane and Keller will answer your questions about coursework, degrees, and post-degree employment.

*Feel free to join in by posting your own question – or add to a current discussion.*

Each month in 1997, *SCIENCE* Professional Network presents a new interactive, moderated, online discussion about career issues in scientific fields.

John Timpane, Ph.D., who has written extensively on scientific career-related issues, moderates the discussions along with a guest who has on-the-job expertise in the workshop topic.

# SCIENCE

<http://www.sciencemag.org>

*Click on SCIENCE Professional Network.  
Then click on Career Workshops.*





# HUMAN FRONTIER SCIENCE PROGRAM (HFSP)

Bureaux Europe, 20 place des Halles, 67080 STRASBOURG Cedex, FRANCE

Tel: 33 (0)3 88 21 51 21 Fax: 33 (0)3 88 32 88 97 E-mail: info@hfsp.org

## CALL FOR APPLICATIONS FOR 1998 AWARD YEAR (Deadline for receipt of applications is 1 September 1997)

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

### RESEARCH AREAS OF THE HFSP

#### Basic Research for the Elucidation of

##### (B) Brain Functions

1. Elementary Processes
2. Perception & Cognition
3. Movement & Behavior
4. Memory & Learning
5. Language & Thinking

##### (M) Biological Functions through Molecular Level Approaches

1. Expression of Genetic Information
2. Morphogenesis
3. Molecular Recognition & Responses
4. Energy Conversion

### TYPES OF SUPPORT

The program will only support research that **transcends national boundaries**. Thus, **research grants** will be awarded for programs that involve collaboration between teams in different countries; **fellowships** are available to young post-doctoral scientists who wish to work in a different country; **workshops** are organized.

#### RESEARCH GRANTS

Grants for basic research (*up to 3 years*) carried out jointly by research teams in different countries. The principal applicant must be from one of the eligible countries\*.

#### FELLOWSHIPS

**Long Term** (*1- 2 years*) and **Short-Term** (*up to 3 months*) Fellowships for researchers early in their careers and from the eligible countries\* who wish to do post-doctoral research in foreign countries, or for young researchers from outside the eligible countries who wish to do research in one of the eligible countries\*.

#### WORKSHOPS

International workshops can be organized by researchers from the eligible countries.

\* **Current eligible countries are Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Luxembourg, the Netherlands, Portugal, the Republic of Ireland, Spain, Sweden, Switzerland, the United Kingdom and the United States.**

**RESEARCH GRANTS AND LONG-TERM FELLOWSHIPS : APPLICATION DEADLINE IS 1 SEPTEMBER 1997**  
(awards to be announced in April 1998)

Applications for **Short-Term Fellowships** and **Workshops** can be submitted **throughout the year**

**Guidebooks and application forms** will be available in mid-April 1997 and may be obtained upon written request by addressing the form below to the HFSP or by E-mail. Applications using previous year's forms are not accepted. You can retrieve copies of our guidebooks and application forms from our anonymous FTP server at [ftp.hfsp.org](ftp://ftp.hfsp.org) or from our World Wide Web site at <http://www.hfsp.org>

Surname

First name

Institution

Postal Address

☐ **Research Grant**

☐ **Long-Term Fellowship**

☐ **Short-Term Fellowship**

☐ **Workshop**

[please check the relevant box(es)]



## DISPLAY CLASSIFIED ADVERTISEMENTS

Call for rate and deadline information on display classified advertisements.

Email: [science\\_displayads@aaas.org](mailto:science_displayads@aaas.org)

**Bren Peters-Minnis**  
Recruitment Display Advertising  
Telephone: (202) 326-6541  
FAX: (202) 289-6742  
Email: [science\\_displayads@aaas.org](mailto:science_displayads@aaas.org)

**Gabrielle Boguslawski**  
Recruitment Sales Manager  
Telephone: (718) 491-1607  
FAX: (202) 289-6742

**Debbie Cummings**  
European Recruitment Advertising  
Telephone: +44 (0) 1223 302067  
FAX: +44 (0) 1223 576208

For **MEETINGS AND ANNOUNCEMENTS** display advertisements, see pages 295, 298, 300-301, 307, and 314.

## LINE CLASSIFIED ADVERTISEMENTS

**How to Submit a Line Classified Ad:** Submit double-spaced typewritten copy. Do not include any abbreviations. SCIENCE will edit and typeset ads according to SCIENCE guidelines. Include billing information and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training, Services. SCIENCE cannot provide proofs of typeset line ads. Line advertisements are not commissionable.

**Estimates:** SCIENCE will provide a cost estimate for line ads. This is an approximate cost only. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.

For line advertising deadlines, call Eric Banks. Telephone: (202) 326-6555; FAX: (202) 289-6742. Email: [science\\_classifieds@aaas.org](mailto:science_classifieds@aaas.org)

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

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

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

**Ads from Outside the U.S.:** A discount of \$30 will be offered to advertisers making payment in U.S. dollars by checks drawn on U.S. banks. Contact Debbie Cummings. Telephone: +44(0) 1223 302067; FAX: +44(0) 1223 576208.

**SCIENCE Professional Network:** Unless otherwise instructed, every classified advertisement submitted for publication in SCIENCE is automatically posted on SCIENCE's on-line classified advertising service, SCIENCE Professional Network, at no additional charge.

<http://www.sciencemag.org>

**Mail, FAX or Email materials to:**  
SCIENCE Classified Advertising  
1200 New York Avenue, N.W., Room 911  
Washington, DC 20005  
FAX: 202-289-6742

Email: [science\\_classifieds@aaas.org](mailto:science_classifieds@aaas.org) (please include your telephone number in Email)

SCIENCE reserves the right, at its discretion, to edit or decline to publish advertisements submitted to it.

## POSITIONS OPEN

### DIRECTOR INSTITUTE ON AGING University of North Carolina at Chapel Hill

**Position Summary:** The **DIRECTOR** will be responsible for the leadership, growth, management, and coordination of a newly-developed Institute on Aging at the University of North Carolina at Chapel Hill. Legislative authority and core funding for the Institute were provided (August 1996) by action of the North Carolina General Assembly. The mission of the Institute is to develop national prominence in research, educational, and community service while helping older North Carolinians maximize their health and well-being. Under interim leadership the Institute on Aging operates separate divisions of Research, Public Service, and Educational Programs. Faculty currently participate in the Institute from disciplines representing the social sciences, health sciences, education, law, social work, and other professional and academic areas.

The Director of the Institute will report to the Vice Provost for Health Affairs at UNC-CH, and will be guided by a Statewide Advisory Committee that will bring to the program the views and perspectives, as well as the active participation, of faculty with academic interests in aging from throughout the 16-campus University of North Carolina System, the State's community colleges, private colleges and universities, and various state and federal agencies. The Director will be responsible for establishing effective alliances among interests in North Carolina that are engaged in the field of aging, and in creating cross-disciplinary and cross-campus programs that make optimum use of available resources.

**Qualifications:** The ideal candidate will have a distinguished record of research teaching and/or public service in aging, and will be eligible for academic appointment at the rank of full professor. Experience in acquiring research grants and in program development will be valued generally, and especially now since the Institute will be in a start-up mode for the first several years of operation. In addition, the candidate should have a strong commitment to interdisciplinary work along with experience in fostering such activities in aging.

Applicants and nominees should send a letter of application, curriculum vitae, and the names, addresses and telephone numbers of at least four references to:

**Dr. William H. Campbell, Chair**  
Search Committee for Director of Institute on Aging  
School of Pharmacy (CB #7360)  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27599-7360

*The University of North Carolina at Chapel Hill is an Equal Opportunity Employer.*

### LABORATORY DIRECTOR NATIONAL MARINE FISHERIES SERVICE National Oceanic & Atmospheric Administration San Francisco, California

The Southwest Fisheries Science Center announces a vacancy for **DIRECTOR**, Tiburon Laboratory (Research Fishery Biologist GS 15). Director plans and manages research programs, interacts with private industry, universities, state government, national and international research organizations. Director is responsible for developing conceptual approaches and conducting research programs on the role of groundfish and salmon in the California Current Ecosystem. The position (W/NMF/97082.JN) is open to applicants April 9 through 30, 1997. Vacancy specifics available at <http://www.rdc.noaa.gov/~webvas/>.

### ASSISTANT/ASSOCIATE PROFESSOR PLANT PATHOLOGIST/ PLANT MOLECULAR BIOLOGIST

Montana State University Plant Pathology Department seeks applicants with interests in basic and applied aspects of plant molecular genetics pertinent to control of plant disease for a nine-month, **TENURE-TRACK POSITION** (85% research, 15% teaching). Responsibilities: Develop competitive, externally-funded research program in an innovative area of plant molecular genetics: Teach graduate and undergraduate courses in area of interest. Required: Ph.D. in plant pathology, plant genetics or related field with experience in plant molecular genetics. Applicants must request complete vacancy announcement before applying. Screening begins May 19, 1997. Start: September 1, 1997. Salary negotiable. Telephone: 406-994-4832; FAX: 406-994-1848; Email: [upljd@gemini.oscs.montana.edu](mailto:upljd@gemini.oscs.montana.edu). Americans with Disabilities Act/Equal Opportunity/Affirmative Action/Veterans Preference.

## POSITIONS OPEN

The Division of Basic Sciences (DBS), National Cancer Institute (NCI) is recruiting for several **TENURE-TRACK RESEARCH POSITIONS**. The mission of the DBS is to plan, direct, coordinate, and evaluate the NCI's intramural programs in basic science relating to cellular, molecular, genetic, biochemical, and immunological mechanisms relevant to the understanding, diagnosis and treatment of cancer. Candidates must have a Ph.D. or M.D. and should possess a strong record of scientific accomplishments in the conduct of research in cancer biology. Successful candidates will demonstrate the ability to establish an independent research program in molecular and cellular biology. Applications must include curriculum vitae and bibliography, letter of interest stating research goals, and three letters of reference. The completed application should be received by April 28, 1997 to: Ms. Jacquelyn Heilbron, Building 31, Room 3A20, 9000 Rockville Pike, Bethesda, MD 20892. The NCI is an Equal Opportunity Employer.

### CHAIR DEPARTMENT OF ENVIRONMENTAL MEDICINE UNIVERSITY OF ROCHESTER School of Medicine and Dentistry

The University of Rochester seeks candidates for the **CHAIR** of the Department of Environmental Medicine. The Department of Environmental Medicine is a multidisciplinary department devoted to basic science investigation related to toxicological issues. The Department also encompasses an active clinical unit.

The successful candidate will have a strong national and international reputation in research, demonstrated leadership in administrative activities, a commitment to academic excellence and an interest in professional medical education.

The Trustees of the University of Rochester have recently approved a Strategic Plan for the University of Rochester Medical Center that maintains a commitment to environmental medicine. This plan will allow for greater interactions between the Department of Environmental Medicine and other areas of strength of the Medical Center. The plan is also designed to foster collaborations with the undergraduate campus of the University.

Nominations, along with a curriculum vitae, should be sent to:

**J. Edward Puzas, Ph.D., Chair**  
Search Committee  
Department of Orthopaedics, Box 665  
University of Rochester School  
of Medicine and Dentistry  
Rochester, NY 14642

Email: [epuzas@orthomail.ortho.rochester.edu](mailto:epuzas@orthomail.ortho.rochester.edu)

*The University of Rochester is an Affirmative Action/Equal Opportunity Employer. Qualified female and minority applicants are encouraged to apply.*

### ASSISTANT PROFESSOR BIOCHEMISTRY

Applications are invited for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level in the Department of Biochemistry, West Virginia University School of Medicine. Applicants must have a Ph.D. in biochemistry or related subject with significant research experience. Persons working in the areas of structure/function in proteins or signal transduction at the cell surface/cytoplasmic level are preferred although applicants in other areas of biochemistry who have extramural funding will be considered. The successful applicant will be expected to participate fully in the teaching and research programs of the Department. Review of completed applications will commence in July and the appointment is anticipated to begin early in 1998 although applications will continue to be screened until the position is filled. Applicants should submit a letter detailing their research interests and future plans, a complete curriculum vitae and the names, addresses and telephone numbers of three referees to: Dr. J. P. Durham, Search Committee Chair, Department of Biochemistry, P.O. Box 9142, West Virginia University, Robert C. Byrd Health Sciences Center, Morgantown, WV 26506-9142. Equal Opportunity Employer/Affirmative Action.



## POSITIONS OPEN

### CLINICAL INVESTIGATION RESEARCH PROGRAM

The College of Medicine and the H. Lee Moffitt Cancer Center & Research Institute at the University of South Florida are seeking applications from **ASSISTANT PROFESSOR** level individuals to participate in the Clinical Investigation Program. The position of Assistant Professor requires that the applicant have a Ph.D. or M.D. and two or more years of postdoctoral training. Preference will be given to candidates who have demonstrated research leadership in basic science related to cancer research. Successful individual must have a Ph.D. with at least five years of experience in studying the molecular, cellular biology and physiology of transport proteins. Experience in development of yeast models for structure/function analysis is necessary. Applicant should also have experience in drug development utilizing yeast models. Expertise in the development of new cancer drugs and determining mechanisms of action and drug resistance is also necessary. This position may be tenure-earning.

Send current curriculum vitae and a brief statement of major academic interests to: **W. S. Dalton, Ph.D., Associate Center Director for Clinical Investigation, Moffitt Cancer Center, 12902 Magnolia Drive, Tampa, FL 33612.** Applications must be postmarked by the deadline of May 8, 1997.

The University of South Florida is an Equal Opportunity/Equal Access/Affirmative Action Employer. For disability accommodations please contact: Becca Koransky at 813-979-3887; a minimum of five working days in advance. TDD 813-974-2218.

**PROTEIN BIOCHEMIST:** The Department of Biochemistry, Microbiology and Molecular Biology at the University of Maine seeks a biochemist with research interests in protein-protein or protein-nucleic acid interactions to fill a tenure-track position at either the **ASSISTANT** or **ASSOCIATE PROFESSOR** level, available September 1, 1997. Additional research experience in the molecular genetics or developmental biology of aquatic organisms is desirable. A Ph.D. and postdoctoral experience are required. The successful candidate will be expected to maintain a vigorous, extramurally-funded research program and contribute to teaching of the undergraduate and graduate curricula in biochemistry. Minimum salary is \$40,000 per academic year. Send a cover letter, description of research interests, curriculum vitae, and three letters of recommendation to: **Dr. Michael E. Vayda, Chair, Biochemistry Search Committee, 5735 Hitchner-BMMB, University of Maine, Orono, ME 04469-5735.** Review of applications will commence June 1, 1997 and applications will be considered until a suitable candidate is located. Women and minorities are encouraged to apply. The University of Maine is an Affirmative Action/Equal Employment Opportunity Employer.

### AUDITORY RESEARCH POSITION

Full-time position in Auditory Research is offered in the Department of Otolaryngology and Laryngology at the Harvard Medical School and Children's Hospital, Boston. This position will carry an appointment at least at the level of **ASSISTANT PROFESSOR** at the Harvard Medical School in the Department of Otolaryngology and Laryngology.

Preference will be given to applicants whose interests are in hair cell regeneration. Participation in the teaching of residents and fellows in the Department will be required.

Start-up funds are available, but the candidate chosen is expected to generate grant support. *Minority candidates are encouraged to apply.* Application should be submitted by mail no later than June 1, 1997 to:

**Gerald B. Healy, M.D.  
Otolaryngologist-in-Chief  
Children's Hospital  
300 Longwood Avenue  
Boston, MA 02115**

**ASSISTANT PROFESSOR,** Neurobiology, Biology Department, tenure-track. Requirements: Ph.D. in Neurobiology, research interests in invertebrates, and a strong commitment to undergraduate/graduate teaching. Duties: Teach neurobiology and more general courses such as evolutionary theory and invertebrate zoology. Establish an independent research program and provide advisement to pre-health students. Send letter, curriculum vitae (including transcripts), three letters of recommendation, statement of teaching philosophy and research interests to: **Search Chair-Biology, State University of New York at New Paltz, Affirmative Action Office, HAB 501, 75 South Manheim Boulevard, New Paltz, NY 12561.** Deadline May 8, 1997. *Affirmative Action/Equal Opportunity Employer/Americans with Disabilities Act Employer.*

## POSITIONS OPEN



### THE MEDICAL COLLEGE OF GEORGIA ASSISTANT OR ASSOCIATE PROFESSOR NEUROPHARMACOLOGY/NEUROSCIENCE

A search is re-opened for a tenure-track position as **ASSISTANT OR ASSOCIATE PROFESSOR** of Pharmacology and Toxicology at the Medical College of Georgia. The successful candidate must hold a Ph.D. or M.D. degree and will be expected to establish an independent extramurally-funded research program utilizing molecular and/or cellular approaches. We desire applicants with outstanding research accomplishments in the areas of neuropharmacology, neural signal transduction or neurophysiology, who can collaborate with investigators from several disciplines as part of a growing neuroscience community. Excellent core resource facilities exist including those for DNA sequencing, analytical chemistry, transgenic animals, and aged primates. Teaching responsibilities will be in medical and graduate courses. Competitive salary, laboratory space, and start-up funds are available. Please send a curriculum vitae, a letter describing research plans, and the names of three referees to: **R. W. Caldwell, Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA 30912-2300.** Application deadline is June 1, 1997. *The Medical College of Georgia is an Affirmative Action/Equal Opportunity Employer. (J1668)*

### ASSISTANT, ASSOCIATE PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry at the F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland, invites applications for one **TENURE-TRACK FACULTY** position at the Assistant/Associate level available in 1997. Outstanding candidates in the areas of biochemistry, molecular and cell biology are encouraged to apply. Candidates at the Assistant Professor level must have postdoctoral experience and will be expected to develop a vigorous basic research program. Applicants for Associate should have an ongoing extramurally-funded research program, and have teaching experience. The successful candidate will participate in training of students in medical school and in a graduate program. Please send curriculum vitae, reprints of three to five recent publications, a one-page statement of future research plans, and the names of at least three preferred references by May 20, 1997 to: **Ms. Jane Moran, Department of Biochemistry Search Committee, Uniformed Services University of the Health Sciences, F. Edward Hebert School of Medicine, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** Foreign nationals will only be considered if qualified United States citizens are not available. *USUHS is an Equal Opportunity Employer with a strong commitment to racial, cultural, and ethnic diversity.*

### ONCOLOGY RESEARCH ASSISTANT OR ASSOCIATE PROFESSOR LEVEL

The Cancer Institute of New Jersey and the Departments of Medicine and Surgery at the University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School is looking for an M.D. or M.D./Ph.D. **PHYSICIAN SCIENTIST** with research interests and a record of accomplishments in laboratory or clinical research in molecular epidemiology and/or cancer chemoprevention. The successful applicant must be a Board-certified physician who can participate in the care of patients in a teaching hospital setting. Responsibilities will include interfacing between a strong laboratory research program in carcinogenesis and cancer prevention and the clinical services of The Cancer Institute of New Jersey. The candidate will have an academic appointment in an appropriate department, (e.g., Medicine, Surgery) with a joint appointment in a basic science department.

Applicants should submit curriculum vitae to: **Joseph Aisner, M.D., Chair, Search Committee, UMDNJ—Robert Wood Johnson Medical School, The Cancer Institute of New Jersey, 195 Little Albany Street, New Brunswick, NJ 08901.**

*UMDNJ is an Affirmative Action/Equal Opportunity Employer, Minorities/Females/Disabled/Veterans, and a member of the University Health System of New Jersey. Minorities and women are encouraged to apply.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR NATURAL RESOURCES SCIENCE

Ph.D. in wildlife ecology or related field is required. Postdoctoral experience is highly desirable. Demonstrated ability to develop and maintain a vigorous, extramurally-funded research program and to publish in refereed journals is required. University teaching experience is required. Proven ability to interact effectively with resource management agencies is highly desirable. This is a tenure-track, academic-year position in a multidisciplinary department with a broad commitment to natural resource management. Appointment effective September 1, 1997. Salary is competitive and commensurate with background and experience. Consideration of applications will begin on May 2, 1997 and proceed until the position is filled. Submit a letter of application, curriculum vitae, statement of teaching philosophy and research direction, official transcripts, and three letters of reference directly to: **Peter August, Search Committee Chair, (Log 191162), University of Rhode Island, P.O. Box G, Kingston, RI 02881.** For additional information, see [www.edc.uri.edu/wildcol](http://www.edc.uri.edu/wildcol). *The University of Rhode Island is an Affirmative Action/Equal Employment Opportunity Employer and is committed to increasing the diversity of its faculty, staff and students. Persons from under-represented groups are encouraged to apply.*

### ASSISTANT PROFESSOR OF PHARMACOLOGY AND TOXICOLOGY

The Department of Pharmacology and Toxicology of the Rutgers University College of Pharmacy and the Environmental and Occupational Health Sciences Institute (EOHSI) are seeking a full-time, tenure-track, **ASSISTANT PROFESSOR**. The candidate should have a Ph.D. in pharmacology, toxicology, or a related discipline, or an M.D., plus appropriate postdoctoral training. The successful applicant is expected to develop an independent, funded, research program, participate in the teaching activities of the department and the associated Joint Graduate Program in Toxicology, and become a member of the Toxicology Division of the EOHSI. Research in the Division covers a broad range of subjects and is aimed at seeking solutions to challenging questions in environmental health at the mechanistic level. Interested candidates should submit their curriculum vitae and a list of three references to: **Professor Robert Snyder, Chairman, Department of Pharmacology and Toxicology, Rutgers University College of Pharmacy, EOHSI Building, 681 Frelinghuysen Road, P.O. Box 1179, Piscataway, NJ 08855-1179.** *Rutgers University is an Affirmative Action/Equal Opportunity Employer.*

### BIOLOGIST

Visiting **ASSISTANT PROFESSOR** in the School of Natural and Applied Science at Coastal Carolina University. Full-time, non-tenure-track one-year position available August 1997. Ph.D. required. Undergraduate teaching experience preferred. Responsibilities include teaching introductory biology lecture and laboratory courses. Each applicant should submit a letter of application, curriculum vitae, a statement of teaching philosophy, and names, addresses, and telephone numbers of three references to:

**Colleen A. Lohr, Chair  
Department of Biology  
Coastal Carolina University  
P.O. Box 261954  
Conway, SC 29528-6054  
<http://www.coastal.edu/>**

Screening of applications will begin immediately and will continue until the position is filled. *Coastal Carolina University is an Equal Opportunity/Affirmative Action Employer.*

### COLLECTION MANAGER PALEOBOTANY

The Division of Paleobotany, Natural History Museum and Biodiversity Research Center of The University of Kansas seeks an individual to collect, curate and manage the fossil plants collection. Candidates must have a master's or doctoral degree in botany, biology, or geological sciences, with broad training in plant biology and the geological sciences. This is a **PERMANENT POSITION** to begin July 1, 1997. Salary: \$25,000–\$30,000. Send curriculum vitae, statement of qualifications, and three letters of recommendation to: **Dr. Thomas N. Taylor, Department of Botany, Haworth Hall, University of Kansas, Lawrence, KS 66045.** Review of applications to begin April 30, 1997. *The University of Kansas is an Affirmative Action/Equal Opportunity Employer.*





# Department of Defense Breast Cancer Research Program

The U.S. Army Medical Research and Materiel Command (USAMRMC) will issue a Broad Agency Announcement (BAA) to solicit proposals for breast cancer research. The 1997 Defense Appropriations Act provides \$106 million to continue the Department of Defense Breast Cancer Research Program (BCRP).

The overall goal of this program is to promote research that will lead to the eradication of breast cancer. The objectives of the BCRP are to prevent breast cancer, cure breast cancer, and improve the quality of life for individuals living with breast cancer.

The programmatic strategy will be implemented by a call for proposals in four categories:

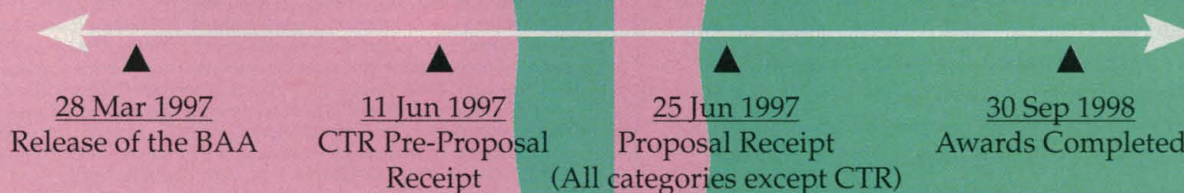
**Idea awards:** The intent of Idea awards is qualitatively different than traditional research projects. The goal of this special award category is to stimulate and reward speculative but especially promising and creative ideas that may yield a high payoff. In accordance with this challenge to be innovative, we invite submission of proposals even if they lack pilot data. However, such proposals must nonetheless demonstrate solid scientific judgment.

**Clinical Translational Research (CTR) awards:** The intent of this category is to support research that applies highly promising and well-founded laboratory or other preclinical strategies to breast cancer patients. Successful proposals must demonstrate that initial clinical results will be obtained during the lifetime of the award. Applicants to this category will submit an initial pre-proposal which will be screened for conformity with category requirements. Highly rated applicants will then be invited to submit a full proposal.

**Computer-based Decision Support Systems (CDSS) awards:** These awards are intended to fund projects that explore innovative approaches to the development of computer-based decision support systems that allow patients to better understand their diagnosis, treatment options, and risks associated with treatment.

**Training and Recruitment awards:** This category contains efforts in the form of pre- and post-doctoral traineeships, career development awards, and sabbaticals. The USAMRMC particularly wants to solicit participation by younger scientists, minorities, and scientists not previously involved in breast cancer research.

Significant execution milestones for this year's program include:



For more information or to receive a copy of the Broad Agency Announcement:

- (1) Download the document from the DOD World Wide Web address:  
<http://mrmc-rad6.army.mil/documents.html>
- (2) Fax your request to (301) 682-5521
- (3) Call (301) 682-5517, ext. 101





*Working on the molecular level  
to conquer, treat, or prevent  
debilitating diseases.*

## **CNS DISCOVERY RESEARCH AT SCHERING-PLOUGH**

At the Schering-Plough Research Institute, in Kenilworth, NJ, scientists are discovering innovative therapeutic agents that challenge humankind's most debilitating diseases. If you are seeking an opportunity to be on the cutting edge of pharmaceutical discovery, become part of an advanced multidisciplinary research group focused on molecular targets for CNS disorders.

### **SENIOR SCIENTIST** *Behavioral Pharmacology*

We seek a talented scientist to play a key role on a team studying behavioral pharmacology in *in vivo* models of CNS disorders. To qualify, you will need a PhD and at least 2 years of experience in behavioral pharmacology, ideally with the dopamine and cholinergic systems. Previous research experience investigating the mechanism of action of CNS drugs and experience in the bridging of behavior and neurochemistry are highly desirable.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, to our Resume Scanning Center at: Dept. DD96-36-BG, P.O. Box 92101, Los Angeles, CA 90009. We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*



**Schering-Plough  
Research Institute**

Using Science for Human Advantage



Wayne State University

BARBARA ANN

**KARMANOS**

CANCER INSTITUTE

### **FACULTY POSITION**

#### **BREAST CANCER IMMUNOLOGY**

The Barbara Ann Karmanos Cancer Institute, in the School of Medicine at Wayne State University, invites applications for a tenure track position at the level of Associate or Full Professor. This will be a joint appointment between the Karmanos Cancer Institute and an appropriate department in the Wayne State University School of Medicine with support derived from a Herrick Foundation endowment. Applicants must have an M.D. and/or Ph.D. degree or equivalent and possess an active research program in breast cancer immunology, including vaccine development, gene therapy and/or immunotherapy. A strong history of publications in peer-reviewed journals, significant external research support and evidence of successful teaching at the graduate level will also be essential.

The candidate will be expected to collaborate with other investigators in the expansion of the Breast Cancer and Stem Cell Biology Programs. The Karmanos Cancer Institute, an NCI comprehensive Cancer Center, provides outstanding collaborative opportunities with clinical, basic, and public health scientists. The academic and community environment of southeast Michigan is one of cultural diversity, and we encourage applications from all qualified female and minority faculty.

Letters of application accompanied by a curriculum vitae, statement of research interests, and the names of three references should be sent to: **Dr. Paul C. Montgomery, Chair of the Cancer Immunology Search Committee, Karmanos Cancer Institute, 110 E. Warren Avenue, Detroit, MI 48201.**

*Wayne State University School of Medicine, the country's largest single campus medical school, is an equal opportunity/affirmative action employer.*



Wayne State University

### **CLINICAL RESEARCH DIRECTOR BREAST CANCER PROGRAM**



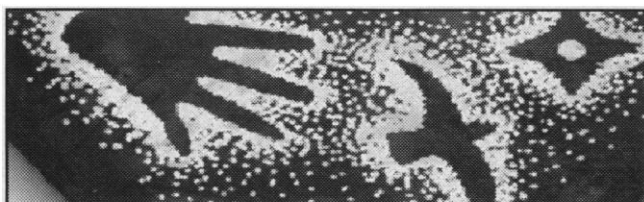
The Barbara Ann Karmanos Cancer Institute (KCI) in Detroit, Michigan is seeking a leader for its clinical research program in breast cancer. The institution is the product of the merger of the Meyer L. Prentis Comprehensive Cancer Center of Metropolitan Detroit with Wayne State University (WSU), the Detroit Medical Center, and the Michigan Cancer Foundation. The partnership holds the prestigious NCI designation of Comprehensive Cancer Center.

The Breast Cancer Clinical Program includes a multidisciplinary practice, a comprehensive breast diagnostic center and system-wide leadership, and authority in expansion of multidisciplinary and diagnostic satellites as networks and affiliations are pursued. This program is part of the overall Breast Cancer Program; the Breast Cancer Research Program has strong peer-reviewed grant-funded clinical and laboratory research in areas of molecular and cellular biology of preneoplastic and early breast cancer, breast cancer heterogeneity and progression, stromal-epithelial interactions in breast cancer development, mechanisms of metastatic spread, development of drug resistance and host responses to breast cancer development, prevention research in high risk individuals, clinical trials of new antineoplastic agents alone or in combination, and studies of high-dose chemotherapy with autologous bone marrow transplant in the high-risk individuals and in patients with advanced disease. The program is an active member of the Southwest Oncology Group and the National Surgical Adjuvant Breast and Bowel Project.

The successful candidate should be an outstanding board certified internist and medical oncologist as he/she will also lead the breast clinical service in the Division of Hematology-Oncology. WSU rank is to be determined. Expertise in translational clinical-laboratory research in breast cancer is preferable. Salary and benefits are competitive and commensurate with experience. The academic and community environment of southeast Michigan is one of cultural diversity, and we encourage applications from all qualified female and minority faculty. Submit CV and names of three references to **Gloria Heppner, Ph.D., Search Committee Chair, Karmanos Cancer Institute, Breast Cancer Program, 110 E. Warren, Detroit, MI 48201.** Telephone 313/833-0715 ext. 2272 or fax 313/831-3564.

*Wayne State University School of Medicine, the country's largest single campus medical school, is an equal opportunity/affirmative action employer.*





## MOLECULAR/CELL BIOLOGIST RESEARCH SCIENTIST

Pharmacia & Upjohn, Inc., is the world's ninth largest pharmaceutical company. We are involved in areas such as Oncology, Infectious, Metabolic, Inflammatory, and Central Nervous System Diseases to help people live longer and fuller lives. If you would like an opportunity to make a difference with Pharmacia & Upjohn, contact us.

We seek a Ph.D. Molecular and Cell Biologist with 2-7 years of post-doctoral experience and a strong record of achievement in research that can be applied to the discovery of new treatments for inflammatory diseases, particularly asthma. The incumbent will conceive, plan, and implement research strategies to discover new anti-inflammatory agents, integrate with existing genomics programs, and provide leadership to research. The successful candidate will establish new assays for use in drug design and new models to study significant molecular mechanisms of human inflammation. Experience as an independent researcher in elucidating gene function through bioinformatics, immunology (particularly lymphocyte and eosinophil

biology), receptor signaling pathways, and regulation of gene expression is highly desirable. A desire to participate enthusiastically in the translation of contemporary scientific concepts into drugs for clinical development is essential, as is the ability to work comfortably in a team setting to achieve research objectives.

At Pharmacia & Upjohn you can make a difference, not only for the sake of your career, but also for the millions of people around the world whose lives will be enhanced by the solutions you help us provide. Pharmacia and Upjohn offers competitive salary and benefits.

For confidential consideration, please send your resume and a description of your research experience to: Pharmacia & Upjohn, Recruiting, Ad #960230, 7000 Portage Road, Kalamazoo, MI 49001. We are an equal opportunity employer with a commitment to work place diversity.



Pharmacia & Upjohn



**HARVARD MEDICAL SCHOOL**  
and  
**MASSACHUSETTS GENERAL HOSPITAL**



are actively recruiting

## Postdoctoral Research Fellows

with backgrounds in

**Biomedical Engineering**  
**Chemical Engineering**  
**Molecular Biology**  
**Physics/Biophysics**

**Oncology**  
**Pathology**  
**Physiology**  
**Immunology**

The Edwin L. Steele Laboratory (MGH/HMS) is committed to improving detection and treatment of cancer through a better understanding of tumor pathophysiology, and the molecular and cellular transport barriers within tumors. There are openings for postdoctoral fellows in any of our six main research areas:

Angiogenesis & blood flow  
Metabolic microenvironment  
Mathematical modeling

Transvascular transport  
Interstitial transport  
Cell transport

Individuals must possess a Ph.D. or M.D., extensive research experience, strong organizational, interpersonal, communication, and computer skills and be prepared to work in a dynamic team environment. Applicants should send a C.V. indicating their area of expertise, a career statement and three reference letters to: Rakesh K. Jain, Department of Radiation Oncology, Massachusetts General Hospital, Boston, MA 02114.



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

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

## MECHANISTIC ENZYMOLOGY IN MOLECULAR RECOGNITION

SmithKline Beecham, a leader in genome-based pharmaceutical research, has recently made major investments in ultra high-throughput screening and combinatorial chemistry. To meet the needs of these core technologies, the newly-formed Department of Molecular Recognition is expanding its efforts in mechanistic enzymology, in the development of novel assay methodology, and in the identification of novel protein targets of therapeutic relevance and their ligands. The responsibilities of this department include: development of assays for enzymatic reactions and protein-ligand interactions amenable to (ultra) high-throughput screening; characterization of enzyme inhibitors and receptor ligands from sources such as high-throughput screening, synthetic and combinatorial chemistry; elucidation of the chemical mechanisms of enzymes and the action of their inhibitors; and identification of the ligands or substrates of orphan proteins. Successful candidates will have highly effective communication and presentation skills, and the ability to work effectively within multi-disciplinary teams.

### Ph.D. Enzymologist/Biochemist

The responsibilities for this position include: elucidation of enzymatic mechanisms and mechanisms of inhibition using pre-steady-state and steady-state kinetics methods; characterization of enzyme-inhibitor and receptor-ligand interactions by kinetic methods and from site-directed mutagenesis; development of assays amenable to high-throughput screening based on enzyme:substrate and protein:ligand interactions using radiometric, spectrophotometric, and fluorescence-based methodologies; identification/purification of novel ligands for orphan receptors and enzymes using standard biochemical purification methodologies and molecular methods such as phage display. Qualified candidates will possess a Ph.D. in Chemistry, Bio-Organic Chemistry, or Biochemistry with 2-3 years of postdoctoral experience. A strong background in pre-steady-state and steady-state enzyme kinetics, characterization of enzymatic mechanism and inhibition and assay development is required. In addition, experience in molecular biology, protein purification and phage display technologies is highly desirable. Refer to Job Code H7-0066.

### M.S. Biochemists (2 positions)

The responsibilities for these positions include: development of assays amenable to high-throughput screening based on enzyme:substrate and protein:ligand interactions using radiometric, spectrophotometric, and fluorescence-based methodologies, enzyme kinetics, protein purification methods to identify novel ligands of orphan proteins, and characterization of enzyme inhibitors and/or receptor-ligand interactions. Qualified candidates will have an M.S. in Bio-Organic Chemistry, Biochemistry or Molecular Biology. A strong background in enzyme kinetics of protein-ligand interactions, protein purification, and assay development is required. Experience in molecular biology is essential for one position and highly desirable for the second position. Refer to Job Code H7-0066-MS for either Biochemist position.

Located in a state-of-the-art research facility in suburban Philadelphia, SmithKline Beecham offers an excellent compensation/benefits/relocation package. Qualified candidates should forward resume and salary requirements, indicating desired Job Code to: SmithKline Beecham Pharmaceuticals, Job Code \_\_\_\_\_, P.O. Box 2676, Bala Cynwyd, PA 19004. Indicating Job Code is essential. For more information on SmithKline visit our Web site at <http://www.sb.com>. We are an Equal Opportunity Employer, M/F/D/V.



**SmithKline Beecham**  
Pharmaceuticals

Challenging the natural limits.



# Postdoctoral Fellows

DuPont Merck Pharmaceutical Company's Chemical & Physical Sciences group has immediate openings for three Postdoctoral Fellows. All projects require individuals with excellent oral and written communication skills and ability to work effectively on interdisciplinary teams.

## Computer Aided Drug Design

Work on aspects of "virtual screening of virtual libraries" as a tool for combinatorial library design and compound selection. Implement and apply algorithms for conformational searching, pharmacophore mapping, active site docking and prediction of binding affinities.

Required: PhD in chemistry, physics or related area, strong background in computational chemistry, extensive experience with state-of-the-art molecular modelling tools, experience programming in Fortran, C or C++. Desired experience: development/use of continuum solvent models and scoring functions for protein-ligand interactions, rational design of drugs or combinatorial libraries, QSAR development, use of chemical databases. **Resumes must be received by May 2nd. Position Code: PS/MJ**

## Protein Crystallography in Structure-Based Drug Design

Postdoctoral position in Structural Biology, a multidisciplinary program dedicated to structure-based drug design by combining various fields such as crystallography, biochemistry, molecular biology, computational chemistry, and nuclear magnetic resonance. Currently investigating many disease related targets, including AIDS and cancer. Access to state-of-the-art technology, including Rigaku R-axis imaging plate, two robotics crystallization units, Silicon Graphics power series ONYX computer and workstation.

Candidate should have PhD with training in protein crystallography. Experience in molecular genetics and/or protein chemistry is preferred but not mandatory. **Position Code CHC/MJ**

## Macromolecular NMR

Postdoctoral position aimed at studying structure/function of biological macromolecules by NMR, and their interactions with potential therapeutics. Part of structural biology group with close collaboration and interactions with X-ray crystallography, molecular modeling, and Univ. of Cambridge NMR group. Excellent capabilities for structural biology research with well-equipped wet biochemistry labs, modern computational resources and two 600 MHz spectrometers (new facility under construction to accommodate an 800 MHz).

Candidate should have expertise in one/more of the following with incentive to broaden their skills in others: molecular biology/biochemistry, structure determination, dynamics, high resolution NMR and methods development. **Position Code PD/MJ**

DuPont Merck offers an excellent compensation/benefits package. The Wilmington site offers a favorable mid-Atlantic location with easy access to major metropolitan areas. Interested applicants should send resumes to: The DuPont Merck Pharmaceutical Company, Human Resources, Position Code: \_\_\_\_/MJ, P. O. Box 80400, Wilmington, DE 19880-0400. Equal Opportunity Employer, M/F/D/V.

**DU PONT  
M E R C K**

**The DuPont Merck Pharmaceutical Company**  
Merging Strengths...Emerging Opportunities.

## AWARD

THE NATIONAL RESEARCH COUNCIL  
*is accepting applications for a*

## Postdoctoral Research Associateship Award

*in the area of*

## Endocrine Disrupting Chemicals

*at the*

## US Environmental Protection Agency's Gulf Ecology Division Gulf Breeze, FL

The National Research Council (NRC) will offer a competitive Associateship award for research at the US EPA'S Gulf Ecology Division in Gulf Breeze, FL. Opportunity is available for a recent or imminent Ph.D. scientist with background and interest in the effects of xenobiotic chemicals on the endocrine-mediated events of reproduction, growth and development in fish. The awardee will work in the above project area as a guest investigator in residence at the US EPA GED. Annual stipend for a recent Ph.D. recipient is \$35,000 and is appropriately higher for more experienced researchers. Award is for one year, renewable for a total tenure of three years. Support is provided for relocation and professional travel, and a health insurance program is offered.

### For Further Information Contact Dr. Leroy Folmar

US EPA, 1 Sabine Island Drive,  
Gulf Breeze, FL 32561

TEL: 904/934-9207

FAX: 904/934-9201

EMAIL: folmar.leroy@epamail.epa.gov

Application, submitted directly to the NRC, are accepted on a continuous basis throughout the year. Those postmarked by August 15 will be reviewed in the October competition, and by January 15, in the February competition.

For application materials contact:  
**NATIONAL RESEARCH COUNCIL**  
The Associateship Programs (TJ2114/TG)

2101 Constitution Avenue, NW  
Washington, DC 20418  
FAX: (202) 334-2759  
EMAIL: rap@nas.edu





#### POSTDOCTORAL FELLOWSHIP

A Postdoctoral position is immediately available in the Cancer and Developmental Biology Laboratory under the supervision of Dr. Colin Stewart, Director, at the ABL-Basic Research Program. Applications are sought from individuals interested in analyzing cell proliferation/cell-cycle regulation during mammalian development, with particular emphasis on their control by genomic imprinting. Experience in the techniques of molecular biology and in analyzing proliferation/cell cycle analysis would be an advantage.

The ABL-Basic Research Program, located at the NCI-Frederick Cancer Research and Development Center, Frederick, Maryland (45 miles north of Washington, DC) offers a full complement of benefits, competitive Postdoctoral stipends, and an excellent work environment. Interested applicants should send a CV, an introductory letter containing a brief description of research experience and contact information for three references to **Human Resources Department/CDB, ABL-Basic Research Program, NCI-FCRDC, PO Box B, Building 428, Frederick, MD 21702-1201. An Equal Opportunity Employer.**



#### RESEARCH ENGINEERS

The National Institute for Occupational Safety and Health, Health Effects Laboratory Division, has immediate openings for engineers skilled in laboratory research and mathematical/computer modeling. Candidates should possess a Master's or Doctorate degree and extensive experience in laboratory-based research. Experience in occupational or environmental safety and health research is highly desirable for leadership positions. Specific research areas include computational fluid dynamics, fault tree analysis, noise control, hazard control technology, and process modification to reduce hazardous exposures of workers. Salary range is \$25—96,000; benefits package available.

For application information, contact the **National Institute for Occupational Safety and Health, Health Effects Laboratory Division, Engineering and Control Technology Branch, 1095 Willowdale Road, Morgantown, West Virginia 26505**. Permanent positions are announced on the CDC home page at <http://www.cdc.gov>. U.S. citizenship is required for permanent positions. Some temporary positions are also available.

*CDC/NIOSH is an Equal Opportunity Employer.*

## TOXICOLOGIST

- San Francisco Bay Area -

**Athena Neurosciences, Inc.** is a growing biotechnology-based company committed to the discovery and development of new products to diagnose and treat diseases of the central nervous system. We are currently seeking a Scientist-level Toxicologist for our South San Francisco facility.

You will provide safety evaluation support to in-house and in-licensed drug candidates; perform dose rangefinding studies for pharmacology & toxicology studies, including preclinical portions of regulatory submissions (INDs, NDAs, PLAs, and parallel foreign submission), clinical protocols and Investigator's Brochures; prepare/review responses to regulatory queries world wide; and provide pharm & toxicology expertise in safety assessment for acquisitions, study design, and preclinical regulatory issues.

The position requires a DVM or Ph.D. in toxicology or equivalent and at least 2 years' experience in preclinical safety assessment; fundamental knowledge of domestic and international regulatory requirements; and excellent written/verbal communication skills. Experience working with FDA, HPB and foreign agencies as well as Board certification by ABT desirable.

Athena offers an innovative and exciting professional, scientific environment in addition to competitive salaries and benefits. Please send resume to: **Athena Neurosciences, Inc., Human Resources, Attn: Job# SC0411-RT, 800 Gateway Blvd., South San Francisco, CA 94080. EOE**



#### Staff Physician Position Pulmonary and Critical Care Medicine Branch NHLBI, NIH

The Pulmonary and Critical Care Medicine Branch (P-CCMB) of the National Heart, Lung, and Blood Institute is recruiting a Staff Physician with an M.D. and board certification or eligibility in Pulmonary Disease and/or Critical Care Medicine to assist in the development of the clinical research programs within the Branch. As Staff Physician, the applicant will work closely with the Chief of the Branch and be responsible in part for the consultation and clinical research services. It is expected that the applicant will be the medically responsible individual for clinical protocols in pulmonary disease and share in the clinical responsibilities of the Branch, including the training of fellows. The applicant should have experience in basic and/or clinical research and an established record of publication in peer-reviewed journals. The role of the Staff Physician, as distinguished from that of a physician in an independent, tenure-track position, is to provide support for other members of the Branch in their clinical research efforts. The Staff Physician, therefore, will not receive independent research funding. The Staff Physician will receive a Civil Service appointment and be eligible for Title 38 bonuses. Questions regarding the position should be referred to **Joel Moss, M.D., Ph.D., Chief, P-CCMB, at 301-496-1597**. Applications must be received by July 31, 1997.

To apply, please send a curriculum vitae, bibliography, a brief statement of research interests, and have sent three letters of recommendation to:

**Office of the Scientific Director, NHLBI  
Building 10, Room 7N214  
10 Center Drive, MSC 1668  
Bethesda, MD 20892-1668**



*NIH is an Equal Opportunity Employer*





# GORDON RESEARCH CONFERENCES

VISIT THE *frontiers of science* GO TO A GORDON CONFERENCE

## 1997 Meeting Schedule

### 1997 SUMMER AND INTERNATIONAL CONFERENCES

	COLBY-SAWYER COLLEGE <i>New London, New Hampshire</i>	HOLDERNESS SCHOOL <i>Plymouth, New Hampshire</i>	KIMBALL UNION ACADEMY <i>Meriden, New Hampshire</i>	NEW ENGLAND COLLEGE <i>Henniker, New Hampshire</i>
June 8 - 13	Muscle: Excitation/Contraction Coupling <i>Eduardo Rios</i> Wound Repair <i>Samuel Leibovich</i>	Phagocytes <i>Robert Clark</i>	Second Messengers & Protein Phosphorylation <i>Patrick Casey</i>	Polyamines <i>John Mitchell &amp; Olli Janne</i> Plant Cell Genetics & Development <i>Joachim Messing</i>
June 15 - 20	Coastal Ocean Circulation <i>Christopher Mooers</i> Nuclear Chemistry <i>C.J. Lister</i>	Proteins <i>P. Andrew Karplus &amp; Angela Gronenborn</i>	Atherosclerosis <i>Helen Hobbs &amp; David Hajjar</i>	Mycotoxins & Phycotoxins <i>Wanda Haschek-Hock</i> Origins of Solar Systems <i>John Kerridge</i>
June 22 - 27	Genetic Toxicology <i>Ken Tindall</i> Ion-Containing Polymers <i>Charles Martin</i>	Mechanisms of Membrane Transport Proteins <i>Carolyn Slayman</i>	Lipids & Lipid Mediators <i>William Smith</i>	Magnetic Resonance <i>Allen Garroway</i> Three Dimensional Electron Microscopy <i>Ronald Milligan</i>
June 29 - July 4	Cell Death <i>Martin Tenniswood</i> Immunochimistry & Immunobiology <i>Diane Mathis</i>	Physical Organic Chemistry <i>J. Michael McBride</i>	Optical Signal Processing & Holography <i>Harold Szu</i>	Atomic Physics <i>Phillip Gould</i> Gravitational Effects in Physico-Chemical Systems <i>Tony Chen</i>
July 6 - 11	Fiber Science <i>Sheldon Kavesb</i> Cell Proliferation, Molecular & Genetic Basis of <i>John Blenis</i>	Drug Metabolism <i>Ronald White</i>	Bones & Teeth <i>Marian Young</i>	Natural Products <i>Jon Clardy</i> Electronic Materials, Chemistry of <i>H. Patrick Gillis &amp; Steven George</i>
July 13 - 18	Chemotherapy of Experimental & Clinical Cancer <i>Scott Kaufmann &amp; Annette Larsen</i> Coatings & Films <i>Donald Boyd</i>	Free Radical Reactions <i>Janusz Lusztyk</i>	Enzymes, Co-enzymes, and Metabolic Pathways <i>Michael Gelb &amp; Carol Fierke</i>	Neural Plasticity <i>Susan Hockfield</i> Hydrogen-Metal Systems <i>Robert Leisure &amp; Louis Schlapbach</i>
July 20 - 25	Corrosion - Dry <i>David Young</i> Elastomers <i>Adel Halasa</i>	Biomaterials: Biocompatibility/Tissue Engineering <i>Jeffrey Hubbell &amp; R. Pilliar</i>	Elastin & Elastic Fibers <i>William Parks</i>	Reactive Polymers, Ion Exchanges & Adsorbents <i>Spiro D. Alexandratos</i> Periodontal Diseases <i>Thomas Van Dyke</i>
July 27 - Aug. 1	Collagen <i>Gail Sonenshein &amp; John Bateman</i> Nonlinear Optics and Lasers <i>Richard Slusber</i>	Fertilization & Activation of Development <i>Richard Nuccitelli</i>	Hormone Action <i>Kelly Mayo</i>	Bioanalytical Sensors <i>Irene Walczak</i> Origin of Life <i>John Rummel</i>
Aug. 3 - 8	Forested Catchments, Hydro-/Geo-/Bio-logical Processes of <i>Myron Mitchell &amp; Egbert Matzner</i> Medicinal Chemistry <i>William Greenlee</i>	Liquids, Chemistry & Physics of <i>C. Austin Angell</i>	Ceramics, Solid State Studies in <i>Carol Handwerker &amp; Roger French</i>	Organic Reactions & Processes <i>John Dillon</i> Molten Salts & Liquid Metals <i>Charles Hussey</i>
Aug. 10 - 15	Chronobiology <i>Gene Block</i> Rock Deformation <i>Harry Green II</i>	Epigenetics <i>Steven Henikoff &amp; Majorie Matzke</i>	Chemical Oceanography <i>Ken Bruland</i>	Inorganic Geochemistry <i>Mark Reed</i> Analytical Chemistry <i>Timothy Harris</i>
Aug. 17 - 22			Materials Processes Far From Equilibrium (NEW) <i>Eric Chaison</i>	

April 20 - 25	April 27 - May 2	May 4 - 9	June 29 - July 4	August 17 - 22
Angiotensin <i>Pierre Corvol</i> Il Ciocco, Barga, Italy	Biological Structure & Gene Expression <i>Benjamin Geiger</i> Kallikreins & Kinins <i>Werner Muller-Esterl</i> Il Ciocco, Barga, Italy	Biodegradable Polymers <i>Emo Chiellini</i> Quinone & Redox Active Amino Acid Cofactors <i>Peter Knowles</i> Il Ciocco, Barga, Italy	Polymers <i>J.P. Vairon</i> <i>Virgil Percec</i> Les Fontaines, Paris	Environmentally Benign Organic Synthesis <i>Stephen DeVito</i> Queen's College, Oxford



**GORDON RESEARCH CENTER:**

UNIVERSITY OF RHODE ISLAND P.O. BOX 984 WEST KINGSTON, RI 02892-0984

PHONE: 401-783-4011 FAX: 401-783-7644 E-MAIL: GRC@GRCMAIL.GRC.URI.EDU

 FULL PROGRAMS IN *SCIENCE*: WINTER—OCT. 11, '96; SUMMER—FEB. 21, '97 OR WORLD WIDE WEB: HTTP://WWW.GRC.URI.EDU

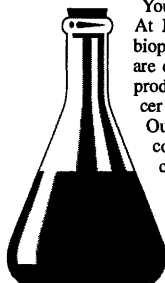
<b>PLYMOUTH STATE COLLEGE</b> <i>Plymouth, New Hampshire</i>	<b>PROCTOR ACADEMY</b> <i>Andover, New Hampshire</i>	<b>SALVE REGINA UNIVERSITY</b> <i>Newport, Rhode Island</i>	<b>TILTON SCHOOL</b> <i>Tilton, New Hampshire</i>
	<b>Cell Contact &amp; Adhesion</b> <i>Urs Rutishauser</i>	<b>Neurotrophins</b> <i>David Kaplan &amp; Story Landis</i>	<b>Liquid Crystals</b> <i>Jay Patel</i>
<b>Mammary Gland Biology</b> <i>Floyd Schanbacher</i> <b>Zeolitic &amp; Layered Materials</b> <i>Charles Kresge</i>	<b>Bioorganic Chemistry</b> <i>John Griffin &amp; Anthony Czarnik</i>	<b>Atmospheric Chemistry</b> <i>Paul Wine &amp; Daniel Jacob</i>	<b>Viruses &amp; Cells</b> <i>Dan Ganem &amp; Peter Palese</i>
<b>Analytical Pyrolysis</b> <i>Lars Carlsen</i> <b>Ligand Recognition &amp; Molecular Gating (NEW)</b> <i>Kathryn Sandberg</i>	<b>Developmental Biology</b> <i>Ruth Lehmann &amp; Eric Olson</i>	<b>Nucleic Acids</b> <i>Roy Parker &amp; Nancy Craig</i>	<b>Carbohydrates</b> <i>Mario Pinto &amp; J.H. Van Boom</i>
<b>Radiation Oncology (NEW)</b> <i>J. Martin Brown</i> <b>Excitatory Amino Acids &amp; Brain Function (NEW)</b> <i>Steve Heinemann</i>	<b>Bioenergetics</b> <i>Sbelagh Ferguson-Miller</i>	<b>Heterocyclic Compounds</b> <i>William Pearson</i> <b>Purines, Pyrimidines &amp; Related Substances</b> <i>Barbara Ramsay-Shaw</i>	<b>Polymer Colloids</b> <i>Donald Sundberg</i>
<b>Laser Diagnostics in Combustion</b> <i>Marshall Long</i> <b>Thin Films &amp; Crystal Growth Mechanisms</b> <i>John Venables &amp; J. Iwan Alexander</i>	<b>Molecular Membrane Biology</b> <i>Suzanne Pfeffer</i>	<b>Parasitism</b> <i>James McKerrow</i> <b>Statistics in Chemistry &amp; Chemical Engineering</b> <i>Lyle Ungar</i>	<b>Condensed Matter Physics</b> <i>Sobo Bhattacharya &amp; Chao Tang</i>
<b>High Performance Computing/Information Infrastructure</b> <i>Anthony Skjellum</i> <b>Plasmid &amp; Chromosome Dynamics</b> <i>Virginia Zakian</i>	<b>Matrix Metalloproteinases</b> <i>Lynn Matrisian</i>	<b>Organic Thin Films</b> <i>Avi Ulman</i> <b>Oscillations &amp; Dynamic Instabilities in Chemical Systems</b> <i>John Tyson</i>	<b>Red Cells</b> <i>Mark Groudine</i>
<b>Genetic Vaccinations (NEW)</b> <i>David Weiner</i> <b>Catalysis</b> <i>Vincent Durante</i>	<b>Catecholamines</b> <i>Nancy Zabniser</i>	<b>Inorganic Chemistry</b> <i>Andrew Barron</i> <b>Organic Photochemistry</b> <i>David Whitten</i>	<b>Epithelial Differentiation &amp; Keratinization</b> <i>Dennis Roop</i>
<b>Clusters, Nanocrystals &amp; Nanostructures</b> <i>Martin Jarrold</i> <b>Microbial Population Biology</b> <i>Julian Adams</i>	<b>Staphylococcal Diseases</b> <i>Steven Projan</i>	<b>Nuclear Physics</b> <i>Doug Beck</i> <b>Organometallic Chemistry</b> <i>Patricia Watson</i>	<b>Hormonal Carcinogenesis</b> <i>George Lucier</i>
<b>Photosynthesis</b> <i>Melvin Okamura</i> <b>X-Ray Physics</b> <i>Massimo Altarelli</i>	<b>Membranes: Materials &amp; Processes</b> <i>Georges Belfort</i>	<b>Cancer</b> <i>Terry Van Dyke</i> <b>Molecular Mechanisms of Microbial Adhesion</b> <i>Sbaron Long &amp; Staffan Normack</i>	<b>Quantitative Structure Activity Relationships</b> <i>Herschel Weintraub</i>
	<b>Dynamics at Surfaces</b> <i>Charles Rettner</i>	<b>Human Molecular Genetics</b> <i>Robert Nussbaum</i> <b>Supramolecules &amp; Assemblies, Chemistry of</b> <i>Larry Romsted</i>	<b>Barrier Function of Mammalian Skin</b> <i>Peter Elias</i>
		<b>Angiogenesis &amp; Microcirculation</b> <i>Harold Dvorak</i> <b>Applied &amp; Environmental Microbiology</b> <i>Parmely Pritchard</i>	<b>Plant Cell Walls (NEW)</b> <i>Andrew Staehelin</i>

<b>August 24 - 29</b>	<b>Aug. 31 - Sept. 5</b>	<b>September 7 - 12</b>	<b>September 14 - 19</b>	<b>September 21 - 26</b>
<b>Illicit Substance Detection (New)</b> <i>Steve Burmeister</i> <i>John Daly</i> Queen's College, Oxford	<b>Molecular Electronic Spectroscopy</b> <i>David Pratt</i> Queen's College, Oxford	<b>Calcium Signalling</b> <i>David Clapham</i> Queen's College, Oxford	<b>Photoacoustic &amp; Photothermal Phenomena</b> <i>Darryl Almond</i> <i>Robert Imhof</i> Queen's College, Oxford	<b>Solid State Chemistry</b> <i>Peter Battle</i> <i>Jack Johnson</i> Queen's College, Oxford



## SENIOR SCIENTIST

**PROTEIN CHEMISTRY  
BE PART OF THE SOLUTION**



You can help make a difference! At ImClone Systems, a leading biopharmaceutical company, we are developing novel therapeutic products for the treatment of cancer & cancer related disorders. Our research focuses on the discovery of novel inhibitors of capillary blood vessel formation that impact the therapy of cancer and other diseases.

You should have a Ph.D. in Biochemistry with 4-8 years experience in protein purification. A strong track record with recombinant protein purification from bacteria, yeast, baculo virus and eukaryotic expressions systems is required. Supervisory experience is essential. The ability to work as a team player with good oral and written communication skills is a must.

We offer competitive salaries and comprehensive benefits. For immediate consideration, qualified candidates can mail or fax resume and salary requirements to:

**Human Resources  
Manager  
Dept. LC-PC  
ImClone Systems  
Incorporated  
180 Varick Street  
New York, NY 10014  
Fax 212-645-2054**



WE ARE AN EQUAL OPPORTUNITY EMPLOYER

## CELL BIOLOGIST

An entry level **FACULTY** position is available in the Department of Anatomy/Division of Basic Sciences, under the direction of the Department Chair, Robert E. Stephens, Ph.D. Candidates must have a doctorate degree, postdoctoral or teaching experience in a relevant field, and a commitment to interdisciplinary teaching. The position will involve teaching histology and genetics to medical students. Primary emphasis is on education, but research and/or other academic activities are expected. Position begins July 1, 1997. Salary and rank will be commensurate with experience and qualifications. Send CV to: Dawn M. Harrington, Director of Human Resources, University of Health Sciences-College of Osteopathic Medicine, 2150 Independence Blvd., Kansas City, MO 64124-2395. AA/EOE.



## ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Physiology and Pharmacology, School of Medicine, Oregon Health Sciences University (OHSU) invites applications for a full-time tenure-track position at the rank of assistant or associate professor. The department will hire a scientist with training and a funded research program in pharmacology. The successful candidate will be expected to participate in the education of medical and graduate students and specifically to teach cardiovascular pharmacology.

Candidates holding a doctoral degree should apply by sending a letter of interest, a statement of research interests and teaching experience, curriculum vitae and the names and addresses of three professional references to **Dr. George D. Olsen, Chair of Search Committee, Department of Physiology and Pharmacology, L221, The Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201-3098**. Application deadline is April 30, 1997. *OHSU is an Affirmative Action/Equal Opportunity Employer.*

## Three Reasons to Advertise in SCIENCE

The 2 May issue of **SCIENCE** offers three special reasons for you to advertise your career opportunities.

- COVER STORY:** *Frontiers in Microbiology*. This annual cover story takes an in-depth look at trends and advances in leading edge fields of research. Scientists from all levels (B.S., M.S., and Ph.D.) will look forward to the groundbreaking news coverage in this issue.
- BONUS DISTRIBUTION:** American Society for Microbiology Meeting (5-7 May, Miami, FL). Reach thousands of scientists attending the ASM meeting, in addition to our regular 160,000 subscribers.
- NEXT WAVE PRINTED PAGE:** "Women Reentering the Scientific Workforce." Placed within the recruitment advertising section of the magazine, this one-page editorial feature offers enhanced visibility to your recruitment advertisement when **SCIENCE** readers turn to this section to read the career-related article.

**Issue Date:** 2 May

**Space Reservation Deadline:** 15 April

### SALES OFFICES:

Gabrielle Boguslawski, NY      Bren Peters, DC  
Phone: 718-491-1607      Phone: 202-326-6541  
Fax: 202-289-6742

**SCIENCE**  
<http://www.sciencemag.org>

American Society for Microbiology Meeting  
Bonus Distribution

"Women Reentering the Scientific Workforce"  
Next Wave Printed Page

Frontiers in Microbiology  
Cover Story

# CNS Drug Discovery



COMMITTED TO  
WORLDWIDE  
LEADERSHIP IN  
HEALTHCARE



Wyeth-Ayerst Research, a major division of Fortune 100 American Home Products Corporation, has the following opportunities in the Central Nervous System Division at our Princeton, New Jersey pharmaceutical research facility.

## Cellular Pharmacologist

Join our Neurodegenerative Disorders Research Group, a high performance research team dedicated to the discovery and development of novel therapeutic agents for the treatment of Alzheimer's disease and schizophrenia. The selected candidate will have a B.S./M.S. in the Life Sciences with up to 4 years laboratory research experience in cell culture and biochemical assays. A research background in cell signal processing and/or cellular toxicity assays and the ability to work independently is highly desirable. **Position #OPSCI-1948.**

## Neuropharmacologists

The selected scientist will perform in vitro experimental studies emphasizing multi-disciplinary approaches to CNS drug discovery in the area of psychotherapeutics. The selected candidate will have a B.S./M.S. in neuroscience, pharmacology, biology or related life science with 2-7 years related laboratory experience. Requirements also include a background in one or more of the following areas: receptor binding, second messenger system assays, and/or methodology involving the measurement of neurochemical parameters. A working knowledge of molecular biology and the application of these techniques to pharmacological studies would be beneficial. Experience with cell/tissue culture techniques, and pharmacological assays is desirable. **Position #OPSCI-2277.**

Wyeth-Ayerst Research offers an excellent compensation and benefits package in a highly professional environment. Please send your resume with salary requirements and Position #, to: **Wyeth-Ayerst Research, Human Resources Dept., P.O. Box 7886, Philadelphia, PA 19101-7886**, or fax your resume (in fine mode if possible) directly into our centralized Research resume database at (610) 989-4854. e-mail: [jobs@RAMAIL1.wyeth.com](mailto:jobs@RAMAIL1.wyeth.com) (ASCII format, no attachments, subject: resume).  
Principals only. Equal Opportunity Employer, M/F/D/V.

## PENNSTATE



University Park  
Campus

## DEAN OF THE EBERLY COLLEGE OF SCIENCE

The Pennsylvania State University is seeking candidates for the position of Dean of the Eberly College of Science. The Dean serves as principal academic leader and chief executive officer of the College and reports directly to the Executive Vice President and Provost of the University. The Dean is responsible for planning, budgeting, implementation, fund-raising, and for the quality of teaching and research.

The position requires an individual who can lead effectively and manage a large and complex college in a comprehensive University setting. Candidates should have significant academic achievement in a field of study commonly included in a college of science with credentials appropriate for a tenured appointment at the rank of professor. The candidates should have a thorough familiarity with the philosophy and responsibilities of a large, research-oriented, land-grant institution. Prior experience in academic administration with responsibility for personnel, programs and/or resources is required. Salary will be commensurate with experience and qualifications.

The Pennsylvania State University is the land-grant University of the Commonwealth of Pennsylvania. It is composed of the University Park Campus and 22 other campuses throughout Pennsylvania. The Eberly College of Science provides instruction and research opportunities in the biological, mathematical, and physical sciences and is one of 10 colleges at University Park. The College had a system-wide enrollment of 3,791 undergraduate students and 579 graduate students in Fall Semester 1996, and has eight academic departments. A full-time equivalent faculty and staff of 925 persons serve at University Park supported by a budget of approximately \$52.7 million and outside research of approximately \$30 million.

Please send nominations, applications, and inquiries to the address below. The search committee will review applications and nominations beginning May 1, and will continue to receive them until the position is filled. You can find more information on the Eberly College of Science on the World Wide Web at <http://www.science.psu.edu>

John A. Dutton, Chair  
Search Committee for the Dean of the  
Eberly College of Science  
The Pennsylvania State University  
201 Old Main, Box SCI  
University Park, PA 16802

An Affirmative Action/Equal Opportunity Employer.  
Women and Minorities Encouraged to Apply.



## POSITIONS OPEN

### PLANT ANATOMIST/MORPHOLOGIST/ PALEOBOTANIST

We seek to fill a **TENURE-TRACK ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** position. Candidates should have a strong background in plant anatomy/vascular plant morphology and/or paleobotany. Applicants should hold a Ph.D. degree, preferably with postdoctoral experience, have a commitment to excellence in teaching and training of undergraduate and graduate students, and have an active research program. Teaching responsibilities would include teaching undergraduate courses in introductory botany, possibly general biology, plant anatomy, vascular plant morphology, and graduate courses in the applicant's specialty of botany. The position will become available September 1, 1998. Review will begin November 1, 1997. Request information from: **W. M. Hess, Chair, Search Committee, Department of Botany and Range Science, 129 WIDB, Brigham Young University, Provo, UT 84602. Email: wilford\_hess@byu.edu. Telephone: 801-378-2451.**

*Brigham Young University, an Equal Opportunity/Affirmative Action Employer, does not discriminate on the basis of race, color, sex, age, national origin, veteran status or against qualified individuals with disabilities. All faculty are required to abide by the standards of The Church of Jesus Christ of Latter-day Saints (LDS). Preference is given to members of the sponsoring church.*

### TENURE-TRACK POSITION ASSISTANT PROFESSOR EQUIVALENT Laboratory of Biophysical Chemistry, NHLBI

The Laboratory of Biophysical Chemistry of the National Heart, Lung and Blood Institute, NIH, seeks an independent, **TENURE-TRACK** physical scientist to develop and apply innovative methods for the determination of three-dimensional structures of macromolecules of biological importance by nuclear magnetic resonance spectroscopy. Applicants should have demonstrated success in the application of novel NMR approaches to the determination of new structures of proteins and protein complexes and analysis of functional correlates. Salary will be commensurate with experience and the research will be fully funded. The successful candidate will be evaluated for tenure within six years. Applications must be received by May 30, 1997. Please submit a curriculum vitae, bibliography, a brief statement of research interests, and have three letters of recommendation sent to: **The Office of the Scientific Director, NHLBI, Building 10, Room 7N214, 10 Center Drive, MSC 1668, Bethesda, MD 20892-1668. NIH is an Equal Opportunity Employer.**

Tenure-track **ASSOCIATE/FULL PROFESSOR** position in genetic toxicology is available in the Institute of Chemical Toxicology, Wayne State University. Individuals with actively funded research examining DNA damage by bioactivated chemical carcinogens with special emphasis on low level dose effects on DNA damage and the relationship between low dose exposure and mutational spectra of target genes in human cells are especially encouraged to apply. Applicants should send their curriculum vitae along with the names and addresses of four references to: **Dr. Raymond F. Novak, Director, Institute of Chemical Toxicology, Wayne State University, 2727 Second Avenue, Detroit, MI 48201. Wayne State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.**

### SCIENTIST

Sierra Pathology Services (SPS), a division of Sierra Biomedical, Inc., is a privately-held contract research laboratory focused on providing molecular pathology services to biotechnology and pharmaceutical companies to support the research and development of new therapeutic drugs. SPS is looking for a highly-motivated and energetic individual to expand our Molecular Pathology capabilities as a **SCIENTIST** in our *in situ* hybridization/immunohistochemistry laboratory.

The ideal candidate will possess a Ph.D. or a B.S./M.S. with extensive experience (5+ years) in molecular biology, pathology, or immunology. Experience with tissue-based techniques such as non-isotopic *in situ* hybridization and immunohistochemistry is highly desirable. If you are interested in joining a rapidly growing organization with an excellent benefits package, please send your résumé and salary requirements to: **Peggy Lee, Sierra Biomedical, Inc., 587 Dunn Circle, Sparks, NV 89431. FAX: 702-331-2289. Equal Opportunity Employer.**

## POSITIONS OPEN

Ph.D. **RESEARCH ASSOCIATE**, apply Baculoviral expression system or its equivalent for characterization of lens epithelial membrane proteins. Please forward curriculum vitae and names and addresses of three references to: **Patrick R. Cammarata, Ph.D., University of North Texas Health Science Center at Fort Worth, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2699. An Equal Employment Opportunity/Affirmative Action Institution.**

### GASTROENTEROLOGY

**ASSISTANT/ASSOCIATE PROFESSOR** in the Department of Medicine, University of California, Davis. Individuals with training and/or experience in gastrointestinal disease. Candidates must hold a Ph.D. degree and at least two years of postdoctoral experience. Area of research interest is open. Individuals with expertise in pancreaticobiliary diseases are preferred. Ability to develop a strong, independent research program and attract extramural funding is required. Expertise and experience in molecular biology, bacterial physiology, and biochemistry related to bacterial biofilm is preferred. Candidate expected to establish an independently-funded research program and participate in teaching. Individual will spend 90% of time in research and 10% informally teaching Clinical and Research Fellows in GI Division and the Department of Medicine. Please send curriculum vitae, research plan description, and five references to: **Joseph Leung, M.D., FRCP, Division of Gastroenterology, UC Davis Medical Center, 4301 'X' Street, Suite 2040, Sacramento, CA 95817. Applications accepted until position is filled but no later than August 31, 1997. The University of California, Davis, is an Affirmative Action/Equal Opportunity Employer.**

### ACADEMIC CHILD NEUROLOGIST

The Department of Pediatrics at the University of Utah and Primary Children's Medical Center in Salt Lake City, Utah is seeking a well-established, Board-certified **PEDIATRIC NEUROLOGIST** to join a busy clinical and academic division of Pediatric Neurology at a major western teaching and research institution. Candidates should be at the associate or full professor level with demonstrated research accomplishments in neurovirology, so as to interface with an active neuroimmunology/neurovirology group at the University of Utah. Demonstrated abilities in teaching and superior clinical skills are also required. Academic appointment will be at a level commensurate with experience and prior performance. Please inquire with: **Francis M. Filloux, M.D., Acting Division Chief, Pediatric Neurology, Primary Children's Medical Center, 100 North Medical Drive, Salt Lake City, UT 84113. The University of Utah is an Equal Opportunity Employer, encouraging applications from women and minorities, and provides reasonable accommodations to the known disabilities of applicants.**

### PLANT MOLECULAR BIOLOGIST

NovaFlora, Inc., is an early stage plant biotechnology company pursuing the development of value-added ornamental plants. An opening exists for a **PH.D.-LEVEL** plant molecular biologist with expertise in the genetic engineering of plant secondary metabolism and gene isolation. Send curriculum vitae, names and telephone numbers of three references, and statement of research interests to:

**Dr. Michael S. Dobres  
NovaFlora, Inc.  
University City Science Center  
Suite 350  
Philadelphia, PA 19104  
FAX: 215-387-4311  
Email: info@novaflo.com.**

**FACULTY POSITION** Department of Pediatrics, Case Western Reserve University. **TENURE-TRACK** position with research emphasis on viral pathogenesis of lung diseases or viral vector development for gene therapy. M.D., Ph.D., or both acceptable. Division is research-oriented with strong bench to bedside programs in CF and asthma; candidate capable of interactive and collaborative work from a strong independent research base will be favored. Send curriculum vitae and names of three references to: **P. B. Davis, Pediatric Pulmonary Division, Case Western Reserve University, BRB 8th Floor, 2109 Adelbert Road, Cleveland, OH 44106. CWRU is an Equal Opportunity Employer.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE

Oregon medical facility is seeking a highly qualified **RESEARCH ASSOCIATE** to perform small bowel, liver, heart, and bone marrow transplantation in rodents, and participate in a research program in the areas of vascularized solid organ transplantation and immunologic tolerance-inducing strategies to solid organs. Salary: \$26,000 per year. Requirements: B.S. or equivalent; at least three years of experience in microsurgical technique in small animals; and greater than one year of experience in vascularized organ transplantation in rodents with a survival rate of greater than 90%. Applicant must have legal authority to work permanently in the United States. Send résumé to: **Susan L. Orloff, M.D., Transplant Service 112-L, Portland VAMC, 3710 S.W. U.S. Veterans Hospital Road, Portland, OR 97201. Facility is an Equal Opportunity Employer.**

### CANCER BIOLOGY RESEARCH ASSISTANT POSITION—MAYO MEDICAL SCHOOL, CLINIC AND FOUNDATION

Position immediately available to work on dysregulation of apoptosis as a mechanism of hepatobiliary oncogenesis. Expertise in cancer biology, molecular biology techniques, and cell culture is required. Please submit curriculum vitae and three letters of reference to: **Nicholas F. LaRusso, M.D., Professor of Medicine and Biochemistry and Molecular Biology, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905. Mayo Foundation is an Affirmative Action/Equal Opportunity Employer.**

### RESEARCH ASSISTANT WRIGHT STATE UNIVERSITY

Full-time **RESEARCH ASSISTANT** in the Schizophrenia Research Program, Department of Psychiatry. Required: M.S. degree and expertise in molecular biology techniques including isolation and manipulation of DNA, PCR, Southern and Northern blots. Preferred: Ph.D. and previous research experience. May be required to travel out of town to collect blood samples. Salary \$22,164 per year. Submit résumé by May 6 to: **Dr. Adityanjee, WSU Department of Psychiatry, P.O. Box 927, Dayton, OH 45401. An Equal Opportunity/Affirmative Action Employer.**

### CANCER RESEARCH

Gifted **SCIENTISTS** are sought to participate in the exploration and potential commercialization of advanced cancer therapies based on immunologic, anti-angiogenic, and other noncytotoxic mechanisms. Candidates should have a Ph.D. or M.D. with a strong research orientation and an exceptional record of academic and/or industrial accomplishment in a relevant discipline, but specific experience in cancer research, while preferred, is not essential. Candidates should send curriculum vitae to: **Paul Cohen, 120 West 45th Street, 39th Floor, New York, NY 10036.**

### POSTDOCTORAL POSITION

**POSTDOCTORAL** projects are available in two areas: the mechanism of mitosis in yeast and cell cycle-specific proteolysis. The experiments will involve molecular genetics and biochemistry in baker's yeast and biochemistry in frog egg extracts. See *J. Cell Biol.*, 130:1373-1385, 1995 and *Science*, 275:1311-1314, 1997. A Ph.D. and experience in molecular biology are required. Additional experience with biochemistry or genetics is desirable. Please send a curriculum vitae and the names of three references to: **Dr. David Pellman, The Dana-Farber Cancer Institute, Harvard Medical School, 44 Binney Street, Boston, MA 02115. FAX: 617-632-2085; Email: david\_pellman@dfci.harvard.edu.**

### POSTDOCTORAL POSITION HYPERTENSION RESEARCH GROUP

Position is immediately available to study the molecular biology and pharmacology of a novel renal angiotensin receptor (AT<sub>2</sub> subtype). This is an excellent hypertension research group that has a focus on vasoactive hormone receptors and signaling. The position requires U.S. citizenship or permanent residency. Send curriculum vitae and two references to: **Janice G. Douglas, M.D., Professor of Medicine and Physiology and Biophysics, Case Western Reserve University, School of Medicine, 10900 Euclid Avenue, Room W165, Cleveland, OH 44106-4982; Telephone: 216-368-4744; FAX: 216-368-4752; Email: jgd3@po.cwru.edu.**



**BIGELOW CHAIR OF  
CONSCIOUSNESS STUDIES  
INAUGURAL APPOINTMENT:  
VISITING PROFESSOR**

The College of Sciences of the University of Nevada, Las Vegas (UNLV) is pleased to announce the establishment of the Bigelow Chair of Consciousness Studies. The purpose of this fully endowed Chair is to allow a series of renowned visiting scholars to create a permanent scholarly environment at UNLV for teaching and research as directly related to dissociative states of human consciousness, especially consciousness nearing and possibly surviving bodily death. The Visiting Professor's approach to teaching and research on the subject of human consciousness shall be from an evidential, scientific, and factual basis and not from a position of religious faith or subjective belief. For this reason, the inaugural Visiting Professor will reside within the College of Sciences, with possible future appointments of the Bigelow Chair in the College of Engineering or other appropriate Colleges.

The first holder of the Bigelow Chair of Consciousness Studies will be a senior scholar with a national reputation in teaching and research in consciousness studies. S/he will most likely hold a permanent faculty position at another university, with an ongoing program of research and teaching. While research interests and competencies will be a consideration, the successful candidate will have exceptional teaching skills and teaching experience in the area of consciousness studies. The inaugural holder of the Bigelow Chair will have as a primary responsibility the development of a contemporary curricular plan while offering undergraduate courses in consciousness studies.

The inaugural appointment will be as a Visiting Professor for a one year term beginning late August, 1997. Salary and benefits are commensurate with the expectations of a renowned scholar. The position of the Bigelow Chair may also include a part- or full-time assistant as necessary and appropriate. Major library holdings on the subject of consciousness are available in the University of Nevada System and in the city of Las Vegas.

Applications, consisting of a curriculum vita, a statement of teaching and research philosophy and intent, and the names and addresses of five references should be submitted to: **Chair, Bigelow Search Committee, College of Sciences, University of Nevada, Las Vegas, Box 454001, Las Vegas, NV 89154-4001** Review of applications will begin April 15th, 1997, and continue until the position is filled. Inquiries can be directed to **Dr. Warren Burggren, Interim Dean, College of Sciences, University of Nevada, Las Vegas at 702-895-3487 or [burggren@ccmail.nevada.edu](mailto:burggren@ccmail.nevada.edu)**. Additional information on the University of Nevada, Las Vegas can be reviewed at our Website, <http://www.unlv.edu>. AA/EOE.



**A new global leader in pharmaceuticals is born.**

Innovative. Progressive. Responsive. This best describes our philosophy at Novartis Pharmaceuticals Corporation. Resulting from the merger of Ciba and Sandoz, Novartis is now the second largest pharmaceutical company in the world. And we will continue to grow by discovering, researching, developing and manufacturing innovative prescription drugs that treat a wide variety of diseases and conditions (including organ transplantation, cardiovascular diseases, schizophrenia, cancer, epilepsy and arthritis)...we are helping millions of people live longer, healthier lives. To do this effectively, we are investing over \$1 billion annually in pharmaceutical research and development.

We invite you to investigate the following postdoctoral research opportunity which is available for one year and may be renewable for a second year by mutual agreement. Based at our attractive, state-of-the-art northern New Jersey locations, you will enjoy an environment that encourages creative thinking and offers ample opportunities for publication and research presentations.

**Postdoctoral Fellow - Oncology**

We are seeking a highly motivated individual who can make important contributions to an innovative research project in the area of cell cycle. A major focus of this project is the involvement of histones in the regulation of gene transcription and expression that are involved in the cell cycle machinery. This research project will be part of a continuous effort in the elucidation of cell cycle regulation in normal and tumor cells. Qualifications include a PhD, a strong background in molecular and cellular biology and expertise in cloning, functional expression, gene regulation and yeast biology.

We offer attractive salaries and comprehensive benefits. Send your resume/curriculum vitae, letter of interest and the names/addresses of three references, to: Staffing Department-MS, Novartis Pharmaceuticals Corporation, Building 122/3, East Hanover, New Jersey 07936. *Note: Your cover letter must indicate Position PD050.* We are an equal opportunity employer M/F/D/V. We appreciate your interest in our Company. Unfortunately, we will only be able to respond to those candidates chosen for interviews or additional follow-up.

**SENIOR FACULTY  
POSITION**

The Department of Biochemistry and Cell Biology invites applications for a faculty appointment at the level of Associate or Full Professor. This is a twelve month, state-funded, tenured faculty position. The general area of expertise of applications should be within the broad field of biochemistry.

Applicants should send a letter outlining their research interest, a curriculum vitae, and a list of three references to: Dr. William J. Lennarz, Chairman, SUNY at Stony Brook, Department of Biochemistry and Cell Biology, 450 Life Sciences Building, Stony Brook, New York, 11974-5215. Deadline for applications is June 1, 1997.

State University at Stony Brook is an affirmative action/equal opportunity educator and employer.



STATE UNIVERSITY OF NEW YORK

National Institute of Arthritis and  
Musculoskeletal and Skin Diseases  
(NIAMS), National Institutes of Health  
(NIH), Public Health Service (PHS),  
Bethesda, Maryland

**POSTDOCTORAL POSITION**

The Genetics Section of the Arthritis and Rheumatism Branch of NIAMS is seeking a postdoctoral fellow with a strong background in molecular biology to study the genetics of inflammatory diseases. The current interest of the laboratory is the identification of the gene causing familial Mediterranean fever by positional cloning. Current projects include genetic and physical mapping, transcript identification, mutation-detection, and large-scale sequencing from the candidate region on chromosome 16. The position is available immediately. Applicants must submit a curriculum vitae, bibliography and three letters of reference to:

**Dr. Daniel Kastner, MD, Chief, Genetics Section, NIH, NIAMS, Building 10, Room 9N-214, 10 CENTER DR MSC 1820, BETHESDA, MD 20892-1820. Voice: (301) 496-8364. Fax: (301) 402-0012.**

E-mail: [kastner@fmf.niams.nih.gov](mailto:kastner@fmf.niams.nih.gov)

NIH is an Equal Opportunity Employer



## POSITIONS OPEN

**TENURE-TRACK ASSOCIATE/FULL PROFESSOR** position in genetic toxicology is available in the Institute of Chemical Toxicology, Wayne State University. Individuals with actively-funded research examining DNA damage and repair, and/or DNA damage by chemicals with special emphasis on low dose effects on DNA damage and repair systems are encouraged to apply. The relationship between low dose chemical exposure and mutational spectra of tumor suppressor/susceptibility genes in human cells represents a program focus area. Applicants should send their curriculum vitae along with the names and addresses of four references to: **Dr. Raymond F. Novak, Director, Institute of Chemical Toxicology, Wayne State University, 2727 Second Avenue, Detroit, MI 48201.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

### DIVISION OF PREVENTIVE MEDICINE AND NUTRITION DEPARTMENT OF MEDICINE COLUMBIA UNIVERSITY

Positions available for **POSTDOCTORAL FELLOWS/POSTDOCTORAL RESEARCH SCIENTISTS/STAFF ASSOCIATES** for July 1997. Areas of research include studies of transgenic and gene-targeted mouse models of hyperlipidemia, apolipoprotein gene regulation, assembly and secretion of lipoproteins from cultured liver cells. Candidates should have experience in molecular biology, cell biology, and/or in performing metabolic investigations in mice. Replies to: **Irene Franck, Division Administrator, Department of Medicine, 630 West 168th Street, 9-510, Columbia University, New York, NY 10032.** *We take Affirmative Action toward Equal Opportunity.*

**POSTDOCTORAL POSITION** available fall 1997 to study kidney development, function, and disease utilizing transgenic and knockout mice. Extensive experience in molecular biology and/or cell culture is preferred. NIH training grant eligibility is required. Please send curriculum vitae and three letters of recommendation to: **Dr. Jeffrey H. Miner, Ph.D., Renal Division, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** FAX: 314-362-8237; Email: [minerj@thalamus.wustl.edu](mailto:minerj@thalamus.wustl.edu). *Equal Opportunity/Affirmative Action Employer, Minorities/Females/Disabled/Veterans.*

**POSTDOCTORAL ASSOCIATE** position in Cornell University in a laboratory studying cognitive effects of developmental brain damage using an animal model. Two current NIH-funded projects concern early exposure to cocaine and lead, respectively. Ph.D. required. Preference given to candidates with expertise in the areas of biology of cognition and statistics. Send curriculum vitae and three letters of recommendation to: **Dr. B. J. Strupp, Department of Psychology and Division of Nutritional Sciences, Cornell University, 109 Savage Hall, Ithaca, NY 14853-6401.** FAX: 607-255-1033; Email: [bsj13@cornell.edu](mailto:bsj13@cornell.edu); Telephone: 607-255-2694. *Equal Employment Opportunity/Affirmative Action.*

**POSTDOCTORAL POSITION** available immediately to study the role of lipid inflammatory mediators in the process of corneal wound healing and ulceration. Background in molecular biology is required with some experience in cell culture and signal transduction desirable. Position is for two to three years. Send curriculum vitae and names of three references to: **Haydee Bazan, Ph.D., Louisiana State University Eye Center, LSU Medical School, 2020 Gravier Street, Suite B, New Orleans, LA 70112.** Telephone: 504-568-6700; FAX: 504-568-5801; Email: [hbazan@lsu.edu](mailto:hbazan@lsu.edu). *LSUMC is an Affirmative Action/Equal Employment Opportunity Employer.*

### CELL/MOLECULAR BIOLOGIST

A position for a Cell/Molecular Biologist/**SENIOR STAFF FELLOW** is open at the Clinical Diabetes and Nutrition Section of the NIDDK/NIH in Phoenix, Arizona to study obesity candidate genes in man. Applicants must have a Ph.D. or M.D. degree and experience in cell biology and molecular techniques. Send curriculum vitae and two letters of reference to: **Eric Ravussin, Ph.D., NIH, 4212 North 16th Street, Phoenix, AZ 85016.**

## POSITIONS OPEN

### FACULTY AND POSTDOCTORAL POSITIONS INSTITUTE OF BIOMEDICAL SCIENCES, ACADEMIA SINICA, TAIWAN, ROC

**POSITIONS** are available in Medical Biotechnology Research Program at Academia Sinica. We are especially interested in individuals with experiences in embryonic stem cell culture, gene knockout techniques, DNA vaccination development and viral vector construction for gene transfer. Knowledge of Chinese is preferred. Applicants should include a curriculum vitae with publication list, a research proposal, selected reprints, a xerox copy of diploma, and three reference letters. Send the materials to:

**Dr. T. K. Tang**  
Institute of Biomedical Sciences  
Academia Sinica  
Taipei 11529  
Taiwan, ROC

Two **POSTDOCTORAL POSITIONS** are available for studying the regulation and function of nonmuscle myosins and myosin kinases. Current projects include studies of the molecular basis of the activation of *Acanthamoeba* myosin I heavy chain kinase (a PAK/STE20 kinase) by phosphorylation, regulation of the kinase by small, and heterotrimeric, GTP-binding proteins *in vitro*, and the relationships between these reactions and signaling pathways and cytoskeletal reorganization *in vivo*; the conformational changes in the structure of the coiled-coil,  $\alpha$ -helical tail that regulate the activity of *Acanthamoeba* myosin II; and the effects of site-directed mutagenesis and chimeric constructs on the activities of myosins and kinases. Candidates should have a good background in molecular biology and/or protein chemistry and experience with myosins is desirable. Salary will be appropriate to experience beginning at \$25,000. Send curriculum vitae and names of at least three references to: **Dr. Edward D. Korn, National Institutes of Health, 9000 Rockville Pike, 3 Center Drive MSC 0301, Building 3, Room B1-22, Bethesda, MD 20892-0301.** *NIH is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available for Neuroscientist to study spatial correlates of single cells in hippocampal formation. Send curriculum vitae, and brief summary of research interests, to: **Pat Sharp, Department of Psychology, Box 208205 Yale Station, Yale University, New Haven, CT 06520.** Email: [psharp@minerva.cis.yale.edu](mailto:psharp@minerva.cis.yale.edu). *Yale University is an Equal Opportunity/Affirmative Action Employer, thus applications from women and members of minority groups are especially encouraged.*

**POSTDOCTORAL POSITION** available for training grant-qualified individual with a background in molecular biology, biochemistry, or intracellular signaling, to work on regulation of STAT protein induction and/or resistance to Fas-mediated apoptosis, in a B lymphocytes. Send curriculum vitae and the names of three references to: **Dr. Thomas L. Rothstein, Room E-556, Boston Medical Center, 88 East Newton Street, Boston, MA, 02118.** Email: [trothstein@med-medl.bu.edu](mailto:trothstein@med-medl.bu.edu); FAX: 617-638-7530.

A **POSTDOCTORAL POSITION** is available to investigate central mechanisms of directional hearing. One line of research focuses on neural mechanisms that derive directional information from spectral (pinna) cues. A second line of research focuses on mechanisms of neural sensitivity to apparent sound motion. Experiments involve single unit recordings throughout the auditory pathway of awake and anesthetized cats. Experience in single unit recording techniques, auditory physiology, and/or computer programming would be desirable. Applications should include a curriculum vitae and names of three references. Inquiries should be directed to: **Prof. Thomas J. Imig, Department of Molecular and Integrative Physiology, University of Kansas Medical Center, 3901 Rainbow Boulevard, Kansas City, KS 66160-7401.** Telephone: 913-588-7407; Email: [timig@kumc.edu](mailto:timig@kumc.edu). *KUMC is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available for a molecular biologist at the Wexner Institute for Pediatric Research at the Children's Hospital, Columbus, Ohio. The successful candidate will contribute to an NIH funded project involving transgenic and knockout technology to investigate the roles of heparin-binding EGF. The Wexner Institute houses research groups from the Departments of Pediatrics and Surgery of The Ohio State University, and contains an on-site transgenic facility. Position open immediately for a recent Ph.D. with a strong background in molecular biology. Interested candidates should send a curriculum vitae and names of three references to:

**Gail E. Besner, M.D., Children's Hospital**  
700 Children's Drive, Columbus, OH 43205  
FAX: 614-722-3903  
Email: [gbesner@chi.osu.edu](mailto:gbesner@chi.osu.edu)

*The Children's Hospital is an Equal Opportunity Employer*

**POSTDOCTORAL/RESEARCH ASSOCIATE** positions are available immediately in Parkinson's disease/neurodegeneration research laboratory. 1) Primate behavior: study cognitive and motor aspects of cortical/subcortical dopamine loss, train and test monkeys on computerized cognitive tasks, assess effects of pharmacologic agents on behavior, perform quantitative immunohistochemical, autoradiographic and *in situ* hybridization studies on post-mortem tissue. Demonstrated expertise in any (or all) of these areas (particularly primate behavior) is highly desirable as is interest or experience in behavioral electrophysiology. 2) Neurochemistry/molecular biology: study mechanisms underlying spontaneous, GM1 ganglioside and trophic factor-induced recovery from experimentally-induced parkinsonism. Studies require skill in molecular biology (RT/PCR, *in situ* hybridization, Western blotting), neurochemistry (HPLC, microdialysis) and histology (immunohistochemistry, receptor autoradiography). Applicants should have demonstrated expertise in some (or all) of these areas. Please send curriculum vitae, description of research interests and experience and names of three references to: **Dr. J. S. Schneider, Department of Neurobiology and Anatomy, Allegheny University, Broad and Vine, MS 408, Philadelphia, PA 19102.** Email: [schneiderj@allegheny.edu](mailto:schneiderj@allegheny.edu). *Equal Employment Opportunity/Affirmative Action.*

### POSTDOCTORAL POSITION IN NEUROIMAGING MONTREAL NEUROLOGICAL INSTITUTE

The Department of Psychiatry and McConnell Brain Imaging Centre at McGill University invite applicants for a **POSTDOCTORAL** position which will be initially made for one year and can be extended up to three years. The successful applicant will have an M.D. or Ph.D. and clinical experience of working with psychiatric patients. NIH-supported research focusing on PET neuroimaging of the serotonergic system. Experience in neuroimaging desirable. If interested, please contact: **Dr. C. Benkelfat.** FAX: 514-398-4866; Telephone: 514-398-6732; Email: [mdbt@musica.mcgill.ca](mailto:mdbt@musica.mcgill.ca).

**POSTDOCTORAL POSITION** available immediately in the Barbara Ann Karmanos Cancer Institute at Wayne State University to study molecular mechanisms of antitumor drug resistance in pediatric cancers. Candidates should have a Ph.D. with a strong background in molecular biology and biochemistry. Send curriculum vitae, statement of research accomplishments, and names of three references to: **Dr. Larry H. Matherly, Karmanos Cancer Institute, 110 East Warren Avenue, Detroit, MI 48201.**

*Wayne State University School of Medicine, the country's largest single campus medical school, is an Equal Opportunity/Affirmative Action Employer.*

Two **POSTDOCTORAL POSITIONS:** A study of altered membrane transport in disease states. Individuals with experience in subcellular fractionation and membrane isolation, cell biological techniques, or membrane protein characterization are encouraged to apply. Competitive salaries, exciting research projects, and stable funding in a productive laboratory are available to those chosen for these positions. **Dr. Michael S. Kilberg, Biochemistry and Molecular Biology, University of Florida College of Medicine, Box 100245, Gainesville, FL 32610.**

**POSTDOCTORAL POSITION** available to study the oxygenases of keratinocytes and mesothelial cells. A background in biochemistry, molecular biology, and tissue culture is desirable. Contact: **Floyd A. Green, M.D., Department of Medicine, State University of New York at Buffalo, 3495 Bailey Avenue, Buffalo, NY 14215, U.S.A.** Telephone: 716-862-3641; FAX: 716-838-2363.

## GRANTS

### NEUROSCIENCE

#### The EJLB Foundation

#### Scholar Research Programme

The EJLB Foundation awards each year up to six (6) grants for research projects in all areas of neuroscience that pertain directly or indirectly to schizophrenia and mental disease.

Eligibility for such grants is restricted to young scientists who are pursuing an independent research career and have given evidence of having significant potential. It is also a requirement that these scientists (i) have earned an M.D. and/or a Ph.D. degree; (ii) have completed their post-graduate training; and (iii) have been admitted after **June 15, 1992** as faculty members of a leading university, or an affiliated non-profit research center, in Canada or elsewhere in the world. Each grant of CAN\$300,000 is disbursed over three (3) years and is non-renewable. The next closing date for receipt of letters of intent is **May 30, 1997**.

Full details regarding this programme and required letter of intent forms may be obtained from:

The EJLB Foundation  
1350 Sherbrooke Street West  
Suite 1050

Montréal, Québec  
CANADA H3G 1J1

Fax (for inquiries only 514-843-4080).

## Hematologist/Oncologist

### Leukemia/BMT Program of B.C.

*Vancouver, British Columbia, Canada*

The Division of Hematology at the BC Cancer Agency, in association with the Vancouver Hospital & Health Sciences Centre (VHSC) and University of British Columbia (UBC), is seeking a Hematologist/Oncologist for its Leukemia/BMT Program of British Columbia.

The Program is provincially-funded and has 26 HEPA-filtered, single-room beds at two adjacent hospital sites (the Vancouver Cancer Centre of the BC Cancer Agency and the VHSC). The staff consists of five Leukemia/BMT hematologists and five fellows as well as a full complement of support staff. Stem cell assay, purging and cryogenic support services are provided by the closely-associated Terry Fox Laboratory. Academic appointments and support are through the Division of Hematology, Department of Medicine, UBC.

The appointee will be experienced in the management of patients with leukemia and those undergoing hematopoietic stem cell transplantation (HSCT), and will have a PhD or equivalent experience in stem cell biology or gene therapy. In addition to making a significant clinical contribution, the incumbent will be expected to develop a clinical research program related to the genetic modification of stem cells and/or immunotherapeutic strategies in HSCT. Applicants must be eligible for licensure by the BC College of Physicians & Surgeons and an appropriate academic appointment at UBC.

While Canadian Immigration regulations accord preference to Canadian citizens and permanent residents of Canada, all qualified applicants are encouraged to apply by sending their curriculum vitae and the names of three references before **May 15, 1997** to: Dr. Michael Barnett, Director, Leukemia/BMT Program of BC, Division of Hematology/Department of Medicine, Vancouver Hospital & Health Sciences Centre, 950 West 10th Avenue, Vancouver, BC V5Z 4E3, Canada.

BC Cancer Agency Tel: (604) 875-4337; fax (604) 875-4763.



M8380

## THE FIFTH RESEARCH GRANT OFFER BY MIZUTANI FOUNDATION FOR GLYCOSCIENCE

Mizutani Foundation for Glycoscience invites grant applications for basic studies in the field of glycoconjugates. The details of the method of application for grants that will be awarded on April 1, 1998 may be found on our home page in the Internet, <http://mizutanifdn.or.jp>.

Mizutani Foundation for Glycoscience: Sen-i Kaikan, Suite 5F, 3-1-11 Nihonbashi-honcho, Chuo-ku, Tokyo 103, Japan (Fax: 81-3-3246-1265, email: [info@mizutanifdn.or.jp](mailto:info@mizutanifdn.or.jp), or, for Japanese only, [infoj@mizutanifdn.or.jp](mailto:infoj@mizutanifdn.or.jp)).

## ANNOUNCEMENT

### MULTIPLE SCLEROSIS SCIENTIFIC RESEARCH FOUNDATION (CANADA)

#### NEW RESEARCH INITIATIVE REQUEST FOR APPLICATIONS

The Multiple Sclerosis Scientific Research Foundation (Canada) has established a new fund to stimulate innovative and collaborative research which will lead to a major advance in understanding the cause of MS or to the development or improvement of therapy for the disease. This fund is separate from the regular research program sponsored by the Multiple Sclerosis Society of Canada and is meant to support large, multi-centre, collaborative studies that are beyond the scope of the regular grants competition.

A total amount of up to approximately \$1.5 million a year per project for a term up to 3 years is available to support selected outstanding proposals. There is no preconceived notion of the number or size of individual awards to be made. However, the Foundation is prepared to commit a significant portion of the funds available to a single initiative in a compelling case.

The research should be collaborative and involve several centres preferably dispersed across Canada. In the case of clinical studies, a number of MS clinics should be involved. The leader of the group making a proposal must be centered at a Canadian institution. However, scientists outside Canada can be involved in the research if their involvement in the group is important to the success of the proposal. The principal investigators involved must all hold the rank of Assistant Professor, Associate Professor, Professor or equivalent.

A letter of intent (2 pages maximum) must be submitted describing the research project and the scientists who will be involved. The novelty and relevance of the project to the goals stated above must be clearly explained. The letter should indicate the approximate level of funding sought and the period of time over which the total amount requested will be spent.

Letters of intent may be submitted at any time before September 1, 1997 to the Chair of the Medical Advisory Committee of the Multiple Sclerosis Society of Canada and will be reviewed by that Committee. Applicants selected will be invited to submit a complete proposal for competitive review by a committee of experts. If proposals received do not meet the objectives of the Foundation and the Multiple Sclerosis Society of Canada, no award will be made.

Please send letters of intent to :

Dr. T. Peter Seland  
Chair, Medical Advisory Committee  
Multiple Sclerosis Society of Canada  
250 Bloor Street E., Suite 1000  
Toronto, Ontario M4W 3P9 Canada



The Multiple Sclerosis  
Scientific Research  
Foundation



La Fondation  
pour la recherche scientifique  
sur la sclérose en plaques



## POSITIONS OPEN

**POSTDOCTORAL FELLOWSHIPS** available (U.S. citizens/permanent residents) to expand the following established research programs: (1) Determinants of signaling specificity for G-protein coupled receptors; (2) structural and functional characterization of imidazole/guanidinium receptive sites and their role in cardiovascular/neurological diseases. Research efforts involve a multifaceted approach utilizing tools of molecular biology, protein chemistry and cell biology, and are focused on the development of novel therapeutics that target various aspects of the signal transduction cascade. Send curriculum vitae and three letters of reference to: **Stephen M. Lanier, Ph.D., Department of Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425. An Equal Opportunity/Affirmative Action Employer.**

### LABORATORY OF BIOCHEMISTRY THRESSA STADTMAN, PH.D.

A **POSTDOCTORAL POSITION** is available in the Laboratory of Biochemistry of the National Heart, Lung and Blood Institute in selenium biochemistry research group to investigate bacterial and eukaryotic selenoenzymes. Training and experience in molecular biology, microbiology, gene expression, and enzyme characterization essential. Applicants must have a Ph.D. and less than five years of postdoctoral experience. U.S. citizen or a permanent resident required. Submit curriculum vitae and references to: **Thressa Stadtmann, Ph.D., Laboratory of Biochemistry, 3 Center Drive, MSC 0320, Building 3, Room 108, Bethesda, MD 20892-0320.**

### GRADUATE STUDENT FELLOWSHIP MOUNTAIN RESEARCH CENTER Montana State University, Bozeman

\$15,000 stipend plus fees for graduate students pursuing a degree at Montana State University relevant to the MRC mission: to develop, synthesize, and disseminate knowledge on the natural and/or interrelated cultural factors influencing the future of montane ecosystems. Application deadline for the 1997-1998 academic year is April 30, 1997. For details, see <http://www.mrc.montana.edu> or contact: **Graduate Fellowship Committee, Mountain Research Center, Box 173490, Montana State University, Bozeman, MT 59717-3490. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** to develop new fluorescent dyes and techniques for labeling nucleic acids and to participate in the development of DNA separation and detection methodologies for sequencing and diagnostics. Successful applicants will participate in a collaborative research effort with A. N. Glazer and R. A. Mathies in the Departments of Chemistry and Molecular and Cell Biology. Experience in synthetic organic chemistry is required: physical biochemistry and spectroscopy desirable. Send résumé and letters of recommendation by May 15 to: **Dr. Richard A. Mathies, Department of Chemistry, University of California, Berkeley, CA 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### UNIVERSITY OF CALIFORNIA SAN FRANCISCO POSTDOCTORAL POSITION

Available for recent Ph.D. to study mechanisms of chromosome healing by addition of telomeres to the ends of broken chromosomes. Background in mammalian cell biology and expertise in techniques in molecular biology required. Applicants must be U.S. citizens or permanent residents. Send curriculum vitae and names of three references to: **Dr. John Murnane, Radiation Oncology Research Laboratory, University of California, San Francisco, 1855 Folsom Street, MCB 200, San Francisco, CA 94103.**

### POSTDOCTORAL POSITION STANFORD UNIVERSITY

**POSTDOCTORAL POSITION** immediately available to study the basis of specificity in lipoprotein recognition by proteins of the LDL receptor family. Applicants should have a Ph.D. with a background in protein biochemistry, biophysics, and molecular biology. Previous experience with NMR spectroscopy of proteins is desirable. Please send a curriculum vitae and a list of three references to: **Dr. Stephen C. Blacklow, Department of Pathology, L235, Stanford University Medical Center, 300 Pasteur Drive, Stanford, CA 94305-5324. FAX: 415-498-7605. Email: blacklow@cmgm.stanford.edu.**

## POSITIONS OPEN

Two **POSTDOCTORAL FELLOWSHIPS** are available in the Division of Sleep and Chronobiology, at the University of Pennsylvania. Both fellowships involve basic human research on funded projects involving various aspects of sleep deprivation, chronobiology, neuroendocrine, neuroimmune, and neurobehavioral functions (EEG, EPs, Neurocognitive performance). Applicants must have or be completing their Ph.D., and/or M.D. with prior training in research, preferably with experience in sleep and chronobiology. Please send curriculum vitae and three names of reference to:

**David F. Dinges, Ph.D.  
Chief, Division of Sleep and Chronobiology  
Department of Psychiatry  
University of Pennsylvania School of Medicine  
Room 1013, 423 Guardian Drive  
Philadelphia, PA 19104-6021**

*The University of Pennsylvania is an Equal Opportunity Employer.*

### GRADUATE/POSTDOCTORAL INTERNSHIP PROGRAM

The National Research Council, the operating arm of the National Academy of Sciences and the National Academy of Engineering is establishing a summer internship program to provide 15 students with the unique experience of working at the NRC. **GRADUATE OR POSTDOCTORAL CANDIDATES** in any physical, biological, social science or any field of engineering are invited to submit the application available at: <http://www2.nas.edu/NRC-IP>. Deadline of April 30, 1997. For more information, contact: **NRC-IP@nas.edu** or write to: **Dr. Deborah Stine, National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418.**

**POSTDOCTORAL POSITION** to study the cell biology of antigen presentation and regulation of MHC class II antigens. Studies will focus on understanding antigen processing, dissecting the pathways for presenting self and foreign antigens, and defining novel genes modulating antigen presentation. Projects in the laboratory are directly relevant to understanding autoimmunity and tumor immunology. Experience in protein biochemistry, cell and molecular biology, and/or immunology is an asset. Send curriculum vitae, names and telephone numbers of three references to: **Dr. J. S. Blum, Department of Microbiology and Immunology, Indiana University School of Medicine, 635 Barnhill Drive, Room 255 MS, Indianapolis, IN 46202-5225. Indiana University is an Equal Opportunity/Affirmative Action Employer.**

A **POSTDOCTORAL POSITION** is available to study the regulation of expression of ligand-gated ion channels in neuronal cell lines by ethanol. Previous experience with basic molecular biological (RT-PCR, *in situ* hybridization, genomic DNA libraries, gel shift assays, reporter gene systems) and biochemical techniques (receptor binding, Western Blots) is highly desirable. Mail or FAX curriculum vitae and a brief summary of research experience to: **Dr. Tina K. Machu, Department of Pharmacology, Texas Tech University Health Sciences Center, 3601 Fourth Street, Lubbock, TX 79430. FAX: 806-743-2744.**

**POSTDOCTORAL POSITION** to study the molecular role of Vitamin K in embryonic development. Studies include regulation of gene expression, protein-DNA and protein-protein interactions in tissue culture as well as animal model systems. Ph.D. or M.D./Ph.D. in molecular biology preferred; experience in developmental biology/embryo manipulation beneficial. Must be U.S. citizen or U.S. permanent resident. Send curriculum vitae and names of three references to: **David A. Roth, M.D., Tufts University School of Medicine, NEMC Box 245, 750 Washington Street, Boston, MA 02111. Email: david.roth@es.nemc.org; FAX: 617-636-5649.**

**POSTDOCTORAL POSITION** available immediately to study the cell biology of myoblast transfer and myoblast commitment. Prior experience with myoblast culture techniques, cell transfection and immunohistochemistry preferred. Send curriculum vitae and names of three references to: **Dr. Marcia Ontell, Department of Cell Biology and Physiology, University of Pittsburgh School of Medicine, South BST-Room S337, Pittsburgh, PA 15261. FAX: 412-648-8330. Email: montell@pop.pitt.edu.**

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

## POSITIONS OPEN

### POSITION AVAILABLE

A **POSTDOCTORAL POSITION** is available immediately to study the molecular physiology of neuronal cannabinoid receptors. Whole cell patch clamp electrophysiology and molecular biology techniques will be used to study cannabinoid receptors in neurons expressing cloned cannabinoid receptors using microinjection techniques (*Molecular Pharmacology* 49:707-714, 1996). Experience with electrophysiology and/or molecular biology techniques helpful. Send curriculum vitae and names and telephone numbers of three references to: **Dr. Deborah L. Lewis, Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA 30912. Email: dlewis@mail.mcg.edu.**

*The Medical College of Georgia is an Affirmative Action/Equal Opportunity Employer. (J1669)*

### POSTDOCTORAL POSITIONS UNIVERSITY OF ROCHESTER Rochester, New York

**POSTDOCTORAL POSITION** is available to study the cytoplasmic chaperonin, TRiC that assists in the folding of proteins in yeast. In addition, a position is available to study the genetic instability of *Candida albicans*. The positions are available immediately. Interested candidates should send their curriculum vitae, the names of three references, and a statement of their research experience to: **Drs. Fred Sherman and Elena Rustchenko, respectively, Department of Biochemistry & Biophysics, Box 712, 601 Elmwood Avenue, Rochester, NY 14642. University of Rochester is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available for studies of cytokines that regulate bone turnover. Specific areas of focus include regulation of cytokine production (*JBC* 271: 10984-9, 1996) and cytokine effects on osteoclast activity/differentiation (*JCI* 96:1238-1244, 1995). Must be a U.S. citizen or permanent resident. Send curriculum vitae and names of references to: **Ed Greenfield, Ph.D., Department of Orthopaedics, Case Western Reserve University, 11100 Euclid Avenue, Cleveland, OH 44106-5000. FAX: 216-368-1332; Email: emg3@po.cwru.edu.**

Two **POSTDOCTORAL POSITIONS** are available for up to three years at the University of Pittsburgh Medical Center: 1) to examine granulocyte colony-stimulating factor receptor structure and signaling in normal and leukemic myeloid cells, and 2) to examine the role of G-CSF in hemorrhagic shock. Experience in molecular biology, cell signaling, and/or genetic mouse models is essential. Interested candidates should send curriculum vitae and names of three references to: **David J. Twardy, M.D., Departments of Medicine and Molecular Genetics and Biochemistry, Biomedical Science Tower W1052, 200 Lothrop Street, Pittsburgh, PA 15213-2582. FAX 412-624-7736; Email: twardy@pitt.edu.**

**POSTDOCTORAL POSITION** available. We study Chemical Senses (olfaction, taste and pheromone response) in *Drosophila* at the genetic, biochemical, cellular and behavioral levels. Send curriculum vitae and letters of recommendation to: **Claudio Pikielny, Department of Neuroscience and Cell Biology, University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854. Email: pikielcl@umdnj.edu. UMDNJ is an Affirmative Action/Equal Opportunity Employer, Minorities/Females/Disabled/Veterans, and a member of the University Health System of New Jersey.**

Two **POSTDOCTORAL RESEARCH POSITIONS** to study the cellular and molecular basis for HIV infection of monocyte-macrophage cells, HIV neurotoxicity and HIV-macrophage-neural cell interactions. Strong background in molecular biology, PCR and/or retrovirus biology. Submit letter, curriculum vitae and three references to: **Dr. D. Kolson or Dr. R. Collman, 522 Johnson Pavilion, University of Pennsylvania, Philadelphia, PA 19104-6060. FAX: 215-662-2947; Email: kolson@mail.med.upenn.edu or collmanr@mail.med.upenn.edu.**

**POSTDOCTORAL POSITION**—Developmental Neurobiology: Genetic analysis of pattern formation in the brain of *Drosophila* (see *Cell* 78:437; *Cell* 86:411) by characterizing a collection of mutants defective in the formation of eye-brain neural connectivity. Also, studies on eye-brain interactions in vertebrate tectum development. Send curriculum vitae and references to: **Room 433, Fairchild Building, 7 Divinity Avenue, Harvard University, Cambridge, MA 02138.**



HÔPITAL  
GÉNÉRAL  
D'OTTAWA

OTTAWA  
GENERAL  
HOSPITAL

The **Ottawa General Hospital Research Institute** has post-doctoral training opportunities in its **Centre for Molecular Medicine** and in its **Eye Institute**.

## Post-Doctoral Fellowships

Affiliated with the University of Ottawa, the Research Institute is developing exciting new research programs in the molecular genetics of disease and development. Faculty members have spacious new laboratories and positions are available in 7 of these labs:

- |                     |   |
|---------------------|---|
| Dr. Dennis Bulman:  | genes involved in neurological disorders                            |
| Dr. Kevin Burns:    | cell biology of diabetic nephropathy                                |
| Dr. Sharon Cassol:  | role of mucosa in immunopathology of HIV/animal models              |
| Dr. Lina Dagnino:   | E2F mediated regulation of epithelial differentiation               |
| Dr. May Griffith:   | neural tube development/corneal wound healing                       |
| Dr. David Picketts: | role of a SWI/SNF-like gene in syndromal mental retardation         |
| Dr. Ronald Worton:  | muscular dystrophy gene therapy/dystrophin gene chromatin structure |

Applications are invited from individuals with a keen interest in the molecular basis of genetic disease and previous research training in molecular or cellular biology, chromatin analysis, human or viral genetics, or gene transfer technology.

Applicants should forward a curriculum vitae, a 1-2 page statement of research goals and names of two references to: **Dr. Dennis Bulman, Research Institute, Ottawa General Hospital, 501 Smyth Road, Ottawa, Ontario, Canada K1H 8L6.**

## PRINCETON UNIVERSITY POSTDOCTORAL TEACHING FELLOWS PROGRAM

Princeton University is seeking applicants for its Postdoctoral Teaching Fellows Program. The program is designed to provide up to three years of stipend support to postdoctoral fellows who wish to obtain further training in both research and teaching. The Fellows will spend the majority of their time conducting research in the laboratory of a Princeton University science or engineering faculty member. Fellows will also gain experience in curriculum development, instructional laboratory design and lecturing by working closely with an experienced Master Teacher. The goal of the Program is to prepare candidates for careers in both research and teaching.

Eligible candidates should have a Ph.D. or equivalent post-baccalaureate degree in one of the physical and natural sciences, or engineering. Before applying, applicants must first identify a research mentor from among the Princeton University science and engineering faculty, and obtain his or her agreement to act as research sponsor. A faculty member, who may or may not be the research mentor, will be identified for successful candidates to coordinate the teaching and research activities of the Fellow. The stipend is \$35,000 per annum. Applications are currently being accepted for Fellows to begin at any time during the 1997-1998 academic year. Review of applications will begin June 1, 1997. Applications can be obtained by writing to:

**The Council on Science and Technology**  
123 Lewis Thomas Laboratory  
Princeton University, Princeton, NJ 08544  
tel.: (609) 258-4316, FAX: (609) 258-3345  
email: [cprevost@pucc.princeton.edu](mailto:cprevost@pucc.princeton.edu)

## THE BAYER FACTS:



**Bayer:**

**A premier  
healthcare  
company for  
the 21st  
century.**

Our business is  
to significantly  
improve health  
worldwide.

People are the  
heart of  
our company.

Our corporate  
culture inspires  
and commits all  
to do their best.

**Bayer**

**Pharmaceutical  
Division**

## SCIENTISTS

■ In the highly competitive global pharmaceutical marketplace, there are many "Bayer Facts" which distinguish us as a leader. To name a few, we are part of Bayer Corporation, a \$26.8 billion international diversified organization and one of the most broadly-based healthcare companies in the U.S. Our Pharmaceutical Division has worldwide responsibility for the research and development of treatments for dementia; cancer; diabetes and other metabolic disorders; and rheumatic diseases.

### Senior Associate Research Scientist

■ Using molecular biology techniques, you will identify, isolate, and characterize novel genes to be developed as therapeutic targets for OA and RA. You will also study the relevance of known/novel genes in the disease process as well as express recombinant proteins and purify/perform appropriate enzyme assays.

■ To qualify, you must have a Bachelor's degree and a minimum of 4 years of related experience or a master's degree and a minimum of 2 years of experience in biochemistry or molecular biology, including experience in the areas of recombinant DNA and cell culture techniques which include DNA/RNA isolation, Northern/Southern blotting, PCR, plasmid preps, Western Blotting, cDNA library construction, differential display, etc. DEPT KP-C28-AB

### Associate Research Scientist

■ You will conduct and design experiments and produce timely, accurate reports. Specific research will involve performing cell and molecule-based assays for compound screening that will contribute to the profiling of small molecules. You will maintain various cell lines for such assays and aid in the cloning, expression, and purification of recombinant proteins.

■ To qualify, you must have a Bachelor's degree and a minimum of 4 years of related experience or an MS degree and 2 years of related experience. A strong background in biochemistry, molecular biology, and pharmacology required. Experience with protein characterization and purification as well as molecular assay development (ELISA format) is necessary for screen implementation for therapeutic targets. Experience in transcriptional regulation and a variety of PCR techniques a plus. Strong oral/written communication and teamwork skills are essential. DEPT KP-C28-BC

■ ...and there's one more fact. If you're ready to join us, there's no better time than now. For immediate consideration, please forward your resume (indicating dept code), including salary history to: Bayer Corporation, Pharmaceutical Division, 400 Morgan Lane, West Haven, CT 06516. No agencies or phone calls please. Do you want to learn more about us? Search: <http://www.careermosaic.com/cm/bayer/> An Equal Opportunity Employer M/F/D/V. Bayer Corp. is committed to establishing and maintaining cultural diversity within our work environment.



## POSITIONS OPEN

**POSTDOCTORAL POSITION** is available starting June 1997 to study gene expression in mammalian cells. Experience in tissue culture and transfection is desired. Please send curriculum vitae and names of three references to: **Takao Yagi, SBR-15, The Scripps Research Institute, La Jolla, CA 92037. Email: yagi@scripps.edu; FAX: 619-784-2054; http://www.scripps.edu/biochem/yagi/.**

## POSTDOCTORAL POSITIONS

**POSTDOCTORAL POSITIONS** are available in the Department of Molecular Biology & Biochemistry at the University of California, Irvine. These positions are for one or two years under the sponsorship of the following faculty members: **D. Aswad:** biochemistry of neural functions; **B. K. Burgess:** biochemistry and genetics of nitrogen fixation; **M. G. Cumsky:** mitochondrial protein and import and gene expression in yeast; **R. H. Davis:** biochemical genetics of *Neurospora*; **H. Y. Fan:** animal virology nucleic acid studies in murine leukemia viruses; **C. Glabe:** developmental biology, cell-cell interactions; **G. A. Granger:** cell and molecular mechanisms operative in cellular immunity; **B. A. Hamkalo:** eukaryotic chromosome structure and function; **A. Henschen:** structure-function relationships in protein; **C. C. W. Hughes:** endothelial cells as initiators and targets of immune responses; **A. A. James:** molecular biology of insect vectors for infectious diseases; **H. Luecke:** structure-function studies of membrane-associated proteins; **J. E. Manning:** gene sequence organization in eukaryotic DNA, electron microscopy; and synaptic functions; **M. B. O'Connor:** molecular genetics of development; **T. Osborne:** molecular biology of transcriptional regulator proteins; **T. Poulos:** protein X-ray crystallography and protein engineering; **D. F. Sencar:** regulatory energetics and protein-DNA assemblies; **A. Tenner:** molecular basis of the enhancement of leukocyte function; **K. K. Tewari:** nucleic acids of chloroplasts and other organelles; **S. Tewari:** neuromolecular biology and CNS acting drugs; **L. P. Villarreal:** molecular biology of small DNA viruses; **E. K. Wagner:** nucleic acids and molecular biology of herpesvirus replication. Applicants for postdoctoral studies should send curriculum vitae and the names and addresses of three referees to the appropriate members of the participating faculty. The deadline for applications is June 30, 1997. For further information contact or write to: **The Department of Molecular Biology & Biochemistry, University of California, Irvine, Irvine, CA 92697-3900. The University of California is an Equal Opportunity Employer committed to excellence through diversity.**

## POSTDOCTORAL ASSOCIATE/RESEARCH SCIENTIST

**FULL-TIME POSITION** available to design and conduct experiments using molecular biology methods. Will participate in the development of breast cancer research projects in the Surgery Research Laboratories; analyze and publish results; teach laboratory technicians various procedures. Ph.D. with extensive knowledge of molecular biology methods required. Candidates with experience beyond that of Postdoctoral Associate will be considered for appointment as a Research Scientist. Salary commensurate with experience.

Send cover letter and résumé to: **Department G., Personnel Office #4088, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210.** Review of applications will be immediate and continue until the position is filled.

An Affirmative Action/Equal Employment Opportunity/Americans with Disabilities Act Employer, committed to excellence through diversity.

## UNIVERSITY OF PENNSYLVANIA POSTDOCTORAL RESEARCH POSITION

**POSTDOCTORAL POSITIONS** are available to conduct research in the areas of human gene therapy for HIV-1 infection or molecular biology of Epstein-Barr virus. A strong background in molecular virology or RNA biochemistry is preferred. Please submit a current curriculum vitae, a list of publications, a brief statement of research interests, and the names and addresses of three references to: **Dr. Yan Yuan, Department of Microbiology, University of Pennsylvania School of Dental Medicine, 4010 Locust Street, Philadelphia, PA 19104-6002.**

## POSITIONS OPEN



## POSTDOCTORAL POSITION

The Department of Virology and Immunology at Southwest Foundation for Biomedical Research has a position available immediately in molecular virology to study retroviral pathogenesis in the laboratory of **Dr. Jonathan S. Allan.** Ongoing studies include the examination of natural resistance mechanisms to HIV induced disease in nonhuman primates. Interested individuals with a Ph.D. and/or M.D., D.V.M., and a background in molecular biology should send a curriculum vitae, statement showing area of interest, and three references to: **Director of Human Resources (708), SFBP, P.O. Box 760549, San Antonio, TX 78245-0549. Email: jallan@carus.sfbr.org. See our http://www.sfbr.org for information on our research activities. Equal Opportunity Employer.**

## THE SALK INSTITUTE POSTDOCTORAL POSITIONS AVAILABLE AT THE SALK INSTITUTE FOR BIOLOGICAL STUDIES

Funding is available immediately for **POSTDOCTORAL POSITIONS** to study chromosome structure and function in *Drosophila*. Projects include dissecting the fine structure and sequence composition of a fully-functional centromere, the identification and study of centromere proteins using genetic and molecular methods, and investigating the DNA and protein regulators of meiotic pairing. A doctoral-level degree and experience with general molecular techniques (especially cloning) are essential. Knowledge of genetics or biochemistry is desirable but not necessary. For more information please contact:

**Dr. Gary Karpen**  
Molecular Biology and Virology Laboratory  
The Salk Institute for Biological Studies  
10010 North Torrey Pines Road  
La Jolla, CA 92037  
619-453-4100 ext. 1473  
karpen@salk.edu

*The Salk Institute is an Equal Opportunity Employer.*

## POSTDOCTORAL POSITION CALIFORNIA INSTITUTE OF TECHNOLOGY

Opportunity available for an individual with demonstrated experience in NMR solution structure determination of proteins. Systems under study are those resulting from computational protein design efforts. Facilities include a Varian Unity Plus 600 MHz NMR spectrometer equipped with a triple resonance probe and several Silicon Graphics workstations. Qualified candidates should possess a Ph.D. in chemistry, biology or related field. Please forward curriculum vitae, publications list, and the names and telephone numbers of three references to:

**Dr. Stephen L. Mayo**  
Division of Biology  
m/c 147-75  
California Institute of Technology  
1200 East California Boulevard  
Pasadena, CA 91125  
Equal Opportunity Employer

**POSTDOCTORAL POSITION** available to identify and examine erb-B2 (and other) tumor antigen-specific peptides and/or antibodies using combinatorial approaches and phage display. Experience in molecular biology and biochemistry is required. Please send curriculum vitae (with two key publications) and the names of three references to: **Dr. Susan Deutscher or Dr. Thomas P. Quinn, Biochemistry Department, University of Missouri, Columbia, MO 65211. Applications from women and minorities are particularly encouraged. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP** experience in molecular/cellular biology to study intracellular traffic and membrane transport of ATP-dependent transporters. Position requires a Ph.D. and/or M.D. with cell molecular/biochemistry experience and U.S. citizen/permanent resident status. Send curriculum vitae to: **Dr. I. M. Arias, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111. Email: iarias@infonet.tufts.edu.**

## POSITIONS OPEN

## UCSF AND GENEMEDICINE Cell Biology and Gene Therapy

**POSTDOCTORAL POSITION** in cell biology and gene therapy available for up to two years beginning immediately to work at the Cardiovascular Research Institute/Department of Anatomy at the University of California San Francisco (UCSF) in conjunction with **GENEMEDICINE, INC.** Studies, based at UCSF, will determine the cellular targets of novel plasmid-based gene delivery systems in animals and will examine the effects of experimental disease models on gene delivery *in vivo*. The successful candidate will participate in collaborative experiments involving scientists at UCSF and **GENEMEDICINE**. Experience in molecular biology, cell biology, histology, and a strong interest in applying novel fluorescence- and confocal microscopic techniques to study the cellular targets of gene delivery systems in mice are essential. Excellent oral and written communication skills are also required. Two or more years of previous postdoctoral experience and strong interest in endothelial cell biology are strongly desired. Please send curriculum vitae, summary of previous and current research, and names of three references to: **Dr. John McLean, Box 0130, Cardiovascular Research Institute, University of California, San Francisco, CA 94143-0130. Email: mclean@itsa.ucsf.edu; FAX: 415-476-4845. UCSF and GENEMEDICINE are Equal Opportunity/Affirmative Action Employers.**

## POSTDOCTORAL POSITIONS, PROTEIN/DNA INTERACTIONS AND CANCER GENETICS

**POSITIONS** available to study i) thermophilic DNA-recognition proteins using biochemical, genetic, and structural approaches, and their use in ii) detection of mutations associated with tumor development to explore oncogene and tumor suppressor gene pathways. Applicants should have a Ph.D., preferably with experience in protein-DNA interactions, structural biology, nucleic acid chemistry, DNA and PCR technology, and cancer or human genetics. Competitive salary commensurate with experience. Send curriculum vitae and names of three references to: **Professor Francis Barany, Program of Biochemistry and Structural Biology, Department of Microbiology, Box 62, Cornell University Medical Center, 1300 York Avenue, New York, NY 10021. FAX: 212-746-8587. Equal Opportunity Employer.**

## UNIVERSITY OF MICHIGAN POSTDOCTORAL/LECTURER POSITION Cytochrome P450 Structure/Function/Mechanism of Action

**POSTDOCTORAL POSITION** now available for Ph.D. in chemistry, biochemistry, or related field to study biological functions, structures, and mechanistic aspects of P450 isozymes. Desired: strong chemical background, research experience with publications on chemistry of membrane-bound enzymes, familiarity with analytical techniques, some experience in molecular genetics. Title of Lecturer possible for qualified candidates with previous postdoctoral experience. Send curriculum vitae and reference names, addresses, and telephone numbers to: **Dr. M. J. Coon, Department of Biological Chemistry, Medical School, University of Michigan, Ann Arbor, MI 48109-0606. FAX: 313-763-4581; Telephone: 313-764-9132; Email: mjcoon@umich.edu.**

**POSTDOCTORAL AND GRADUATE STUDENT POSITIONS** available in Neuroscience and Biomedical Engineering. Positions involve studies of neuromuscular plasticity following spinal cord injury. Pharmacological and tissue transplant treatments will be tested as means to reduce spasticity and improve motor function after spinal cord injury. Postdoctoral applicants should have a Ph.D. and/or M.D. and demonstration of productivity. Familiarity with *in vivo* or *in vitro* electrophysiological techniques (e.g., intracellular recording) or alternatively experience with human electrophysiology and biomechanics preferred. Send curriculum vitae and names of three references to: **Dr. David Bennett, 513 HMRC, Division of Neuroscience, University of Alberta, Edmonton, AB, T6G 2S2, Canada. Email: david.bennett@ualberta.ca.**



U.S. Department of Agriculture  
Agricultural Research Service

**Position Title:** Research Horticulturist  
U.S. National Arboretum  
Floral and Nursery Plants Research Unit  
Nursery Crop Research Station  
McMinnville, Tennessee

**Description:**

The ARS is seeking applications for a Research Horticulturist (GS 11/12) who will serve as a lead scientist and member of a team of Federal and State scientists who conduct research to improve overall production efficiency of nursery crops to benefit the nursery industry in the Mid-South, as well as the entire U.S. nursery industry. The incumbent is responsible for conducting laboratory research related to physiological processes important to the growth and development of nursery crop species, such as heat and cold tolerance and heat stress. Incumbent will address problems associated with greenhouse and field nursery crop propagation methods and production practices, including the development of environmentally sound cultural practice guidelines. Incumbent will develop improved propagation and production methods for difficult-to-propagate species. The incumbent also cooperates with ARS and Tennessee State University scientists on the landscape evaluation of nursery crop cultivars and breeding lines.

Candidates must have: research experience leading to peer-reviewed publication; knowledge of woody plants; knowledge of propagation and production protocols; knowledge of horticulture, plant physiology, plant biochemistry and statistics; and, ability to develop and execute an independent research program. A Ph.D. is desirable. Must be a U.S. citizen. Salary is commensurate with experience (GS-11 is \$38,330—\$49,831; GS-12 is \$45,939—\$59,725 per annum). For further information on the research program, contact: **Dr. Ramon Jordan**, TEL: 301/504-6570, FAX: 301/504-5096. For information on application procedures/forms, contact: **Vonda Ehrhart**, 301/344-4638. Applications in response to this advertisement should be marked B-7-13. Applications must be postmarked by June 2, 1997.

**Mailing Address:** USDA, ARS, Human Resources Division  
6305 Ivy Lane, Room 361  
Greenbelt, MD 20770-1435

**Two Tenure-Track Faculty Positions in Molecular Biology**  
**Department of Biochemistry**  
**McMaster University**

The Department of Biochemistry, McMaster University invites applicants for two tenure-track positions at the level of Assistant Professor, although outstanding candidates qualified for higher ranks may also be considered. The Department seeks highly qualified individuals who will establish strong, independent and externally funded research programs in the general area of molecular biology or closely related fields. Areas of research strength in the Department and University include eukaryotic gene expression/regulation, signal transduction, molecular virology, protein targeting, development, cancer biology, macromolecular structure and function, membranes, and structure-based drug design.

McMaster University offers excellent facilities for biochemistry, molecular biology, structural biology and cell biology, and a stimulating research environment that encourages cooperative, multidisciplinary interactions.

The successful candidates will hold a Ph.D. and/or M.D. degree and will have completed a minimum of two years of post-doctoral training. Candidates are expected to participate in undergraduate and graduate teaching and supervision.

Applicants should include a complete curriculum vitae, a summary of past and current research, a statement of future research plans, and the names of at least three referees (complete with phone and fax numbers). These should be submitted by June 30, 1997 to:

**Dr. John P. Capone**  
**Professor and Chair**  
**Department of Biochemistry**  
**McMaster University**  
**1200 Main Street West**  
**Hamilton, Ontario L8N 3Z5**  
**FAX: 905-522-9033**



*In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. McMaster University has an employment equity programme, and encourages applications from all qualified candidates, including women, aboriginal people, people with disabilities and visible minorities.*

# MJ RESEARCH, INC.

*Manufacturer of Peltier Thermal Cyclers*



## THE TECHNOLOGY OF TOMORROW

or over ten years, MJ Research has been a leader in the technology behind the biotech revolution. Join us in bringing the technology of tomorrow to the laboratory. Competitive salaries and benefits.

### SAN FRANCISCO BAY AREA

Become a founding member of the research team at our new facility in South San Francisco. Help make the technology breakthroughs that will drive research for years to come.

**Senior Scientist/Project Leader:** PhD, demonstrated scientific creativity plus at least five years of group leadership. Experience with protein chemistry, molecular biology, DNA sequencing technologies, and genetics preferred. Code MF-1

**Staff Scientists & Scientists:** PhD required. Protein expression, molecular biology, DNA amplification, DNA sequencing, diagnostics, and instrumentation. Code MF-2

**Lab Manager/Senior Technician:** BS/MS required and at least five years experience as a senior technician or lab manager. Duties include ordering supplies, maintaining equipment, and general lab organization. Code MF-3

**Field Service Engineer:** To do in-house service and field trouble shooting of instruments, design of repair procedures and tools and training. Must work closely with Sales and Customer Service. Electrical Engineering and 3-5 years field service experience with instrumentation required. Code TC-4

### BOSTON AREA

**Product Development Scientist:** MS or PhD degree or equivalent research experience. To develop and produce novel products for molecular biology. Experience with *in situ* hybridization and PCR necessary; familiarity with histology and molecular biology techniques a plus. Must have excellent problem solving and communication skills. Code DS-1

**Product Managers:** BS/MS degree required, as well as experience in managing sophisticated products for the biomedical market. Several positions available, in both hardware and consumables. Marketing/diplomatic skills a plus. Code JF-10

### OTHER POSITIONS, OTHER PLACES

**Pacific-rim Distributor Manager:** Must have an MS or PhD degree or equivalent research experience in molecular biology with a strong technical background in DNA amplification and sequencing and demonstrated excellence in sales/marketing. Experience in high-throughput molecular biology applications preferred. Boston or SF based, extensive travel. Code SK-1

**Scientific Sales Representatives:** Scientific Sales Representative positions available in North-central and South-central and Western regions of the U.S. Responsible for technical sales and support of instrumentation and reagents for molecular biology research. PhD preferred with research experience in molecular biology or a related field. A self-starter with demonstrated excellence in organizational and interpersonal communication skills. Prior sales or marketing experience a plus. Code SK-2

*Send résumé & cover letter with proper code to:*



**MJ RESEARCH, INC.**  
Human Resources, Code ??  
149 Grove Street  
Watertown MA 02172 USA



**Ross Products Division of Abbott Laboratories** is a leading manufacturer of pediatric and medical nutritional products and pediatric pharmaceuticals. Currently, we have an excellent opportunity for an experienced **Senior Research Scientist** in our Columbus, Ohio headquarters.

We seek an experienced scientist to manage scientific research, develop research strategies, and evaluate technology. You will direct original research projects and coordinate research with outside investigators, manage multispecialty internal groups, and serve as consultant in your area of expertise.

**Qualified candidates must have a PhD and a minimum of 6 years of scientific research experience in the field of microbiology or immunology.** A proven track record of scholarly publication and technical presentations is necessary as well as exceptional oral and written communication skills as you interact with health care professionals and field sales personnel.

We offer a competitive salary, comprehensive benefits including profit sharing, and a stimulating professional setting. For confidential consideration, send your resume and salary requirements to:

**ROSS** **ROSS PRODUCTS DIVISION**  
**ABBOTT LABORATORIES**  
Staffing Department  
625 Cleveland Avenue  
Columbus, Ohio 43215  
FAX: (614) 624-0030

No phone calls or outside recruiters will be accepted.



The Space Science Division of NASA Ames Research Center anticipates openings for one or more Research Scientists at the entry level in the field of Exobiology and is soliciting letters of interest from potential candidates. Ames Research Center has been NASA's primary center of research in Exobiology for over two decades. Research in Exobiology is a major element of NASA's new program in Astrobiology and includes organic cosmochemistry, the origin of life, biological evolution and its relationship to planetary evolution. Candidates for consideration should have a Ph.D. degree, postdoctoral experience and show exceptional promise in developing an active research program in their field. These positions will require the candidate(s) to conduct independent, peer reviewed research and to interact and collaborate with a broadly multidisciplinary research group in Exobiology including microbiologists, geologists, organic chemists, theoretical biophysicists and paleontologists. Candidates should show evidence of productive research achievements, as evidenced by scholarly publications and/or funded research activity in one or more of the following relevant fields of interest:

**Molecular/Structural Biology.** This field includes experimental studies of peptide-based and/or nucleic acid-based models of auto-catalytic, self-reproducing and evolving systems in the context of the origin of cellular life. Interest in collaborating with theorists working in the same area is expected.

**Molecular Paleontology / Evolutionary Biology.** This area combines molecular biology and evolutionary paleobiology. It requires the application of molecular genetics to the phylogenetic analysis of major organism groups and the evaluation of data of the fossil record for constraints on the timing of major evolutionary events in the history of the biosphere.

**Biogeochemistry / Organic Geochemistry.** In this arena, the disciplines of microbiology, biochemistry, and/or analytical-organic chemistry are combined with use of modern analytical tools to identify and characterize molecular and isotopic biomarkers in ecosystems in extreme environments, ancient rocks and Mars meteorites.

Letters of interest, accompanied by a curriculum vitae, list of publications, names of three professional references and a statement of research interests should be sent to **Dr. Sherwood Chang, Exobiology Branch, M/S 239-4, NASA-Ames Research Center, Moffett Field, CA 94035.** For more information about Exobiology at Ames Research Center visit our web site at [exobiology.nasa.gov](http://exobiology.nasa.gov). Only US citizens will be considered. Salary and GS level will be commensurate with experience. *NASA/Ames Research Center is an equal opportunity employer.*

#### **DIRECTOR, CANCER RESEARCH CENTER OF HAWAII UNIVERSITY OF HAWAII AT MANOA**

The University of Hawai'i is seeking a Director of its Cancer Research Center, a free-standing organized research unit. The Center has just received the status of a NCI-designated Cancer Center with a three-year core grant and comprises 33,000 sq ft of laboratory and office space contained in a modern well-equipped building in Honolulu standing on the campus of the largest Medical Center in the State. With a total budget of about \$10 million, the Center has 26 full-time and affiliate faculty, 26 community-based clinical faculty, about 20 graduate and postdoctoral students and a staff of approximately 140. Through joint appointments and collaborations, the Center has close links with academic departments such as chemistry, genetics and molecular biology, microbiology, environmental biochemistry and the School of Public Health. Research at the Center takes advantage of Hawai'i's unique characteristics as a geographically defined multi-ethnic community and is focused: (1) population-based studies which seek to discover reasons (dietary, genetic or behavioral) for the disparate cancer rates and treatment outcomes observed in different ethnic groups; (2) intervention studies that develop and test strategies for preventing and controlling cancer incidence, morbidity and mortality; (3) laboratory-based studies directed toward understanding molecular mechanisms of carcinogenesis and chemoprevention; (4) chemical and biological characterization of novel compounds with clinical potential from marine and terrestrial species; (5) the center participates in national clinical cooperative trials. The Director reports directly to the Senior Vice President for Research and Dean of the Graduate Division, is responsible for interacting at the highest level with the University and the State, and is expected to further strengthen relationships with local health-care providers and the community. The position attracts a competitive salary, a high level of institutional support from the University, and is tenurable.

Applications are sought from scientists with an M.D. or Ph.D. degree who possess a commitment to excellence; an outstanding record of research productivity and funding, preferably related to areas outlined above; demonstrated abilities of leadership and management; and the vision and drive necessary to fully exploit the challenges and opportunities for growth created by the location and resources of the Center. Applicants should send a letter of interest and curriculum vitae to: **Chair, Cancer Center Director Search Committee, Pacific Biomedical Research Center, University of Hawaii, 1993 East-West Road, Honolulu, Hawaii 96822-2359.** The search committee will begin reviewing applications on June 30, 1997 and will continue until the position is filled. *The University of Hawai'i is an Equal Opportunity/Affirmative Action Employer.*

#### **GLOBAL CAREER OPPORTUNITIES**

##### **ASSISTANT/ASSOCIATE PROFESSOR MEDICAL MICROBIOLOGY**

**MEDICAL MICROBIOLOGY:** The Faculty of Medicine & Health Sciences, United Arab Emirates University seeks Assistant/Associate Professor for each of Bacteriology and Parasitology. Responsibilities: Undergraduate teaching, graduate program development, research and clinical leadership in their respective areas. FMHS operates an integrated/problem-based curriculum and provides research opportunities in a new medical school complex with two associated referral hospitals; web site at <http://www.uaeu.ac.ae>. Applicants should hold a Ph.D and/or a higher professional recognition, with evidence of advanced training, teaching experience, quality research. Familiarity with USMLE, Canadian Qualifying Examinations, accreditation of graduate medical programs, and certification/fellowship (or equivalent) in North America, Australia, Europe, or by the Arab Board would be advantageous. Faculty will receive tax-free salary, annual tickets, support for housing and dependents' school fees. Informal enquiries: Professor FK Dar, Acting Chair, +971 3 511300/672000 (tel) or 659001/672001 (fax) or email: [mbiology@pcmail.uaeu.ac.ae](mailto:mbiology@pcmail.uaeu.ac.ae). Applications should include a full CV indicating depth of interests and experience, a list of all publications and name/phone/fax/address of five referees and addressed to Director of Personnel, Faculty of Medicine & Health Sciences, UAE University, P.O. Box 17666, Al Ain, United Arab Emirates. Applications open until positions are filled, although we expect successful candidates to be in place by August 1997.

# Think Big

Do you need more creative freedom? Do you think in new dimensions? Then you should act now: you will find excellent opportunities in our company, leader of the worldwide diagnostic market.

The objective of our New Technology Unit within the Patient Care division is to fulfill the current and future medical/diagnostic requirements by expanding our technology and product portfolio. Therefore, we are looking for a

## Research Manager

open-minded and eager to drive

You will take international responsibility for the technological conception of future test systems, especially for in-vitro diagnostical methods. As Project Manager you will guarantee reliable evaluation of experiment results, make relevant conclusions in order to facilitate the development of in-vitro measurement systems. You will ensure cooperation between multiple research sites and high quality documentation of results in every phase of the project. Research topics of your challenging tasks will include: surface technology, miniaturisation and system integration. You have a convincing personality, feel at home in international surroundings and constantly look forward, even if the direction may change. Apart from a scientific university degree – preferably in physics or chemistry – you have gathered several years of research and/or management experience in industry or at university. Detailed medical knowledge, skills in chemical and clinical diagnostics are important aspects of your qualification. You possess solid experience in micromechanics and microfluidics or sensor/biosensor technologies and IR spectroscopy. Furthermore, you handle analytical and diagnostic methods routinely. Perfect English and leadership qualities will be expected. Do you think you fulfill the larger fraction of these requirements and that you have the potential and ambition to acquire what is still missing?

We want you to actively influence the strategic direction of our company. If you feel able to do so, please send your comprehensive application as soon as possible – Think big.

**Innovation and commitment – the keys to our success**

**BOEHRINGER  
MANNHEIM  
DEUTSCHLAND**

Boehringer Mannheim GmbH  
Personal PD 2  
Mrs. Ulrike Wensch  
Sandhofer Straße 116  
68305 Mannheim



## Directorship of the Cancer Research Campaign Centre for Cancer Therapeutics and The Harrap Chair of Pharmacology and Therapeutics at the Institute of Cancer Research (University of London)

Applications are invited from scientists of international standing for the position of Director of the Cancer Research Campaign (CRC) Centre for Cancer Therapeutics. The scientist appointed will also fill the newly established Harrap Chair of Pharmacology and Therapeutics.

The CRC Centre for Cancer Therapeutics is internationally renowned for its multi-disciplinary work in the development of new cancer therapies. The wide range of expertise located within the Centre covers research from original chemical synthesis through to Phase II Clinical Trials. Staff of the Centre work collaboratively with world class molecular and cellular biologists within the Institute. The Centre also has extensive industrial collaborations. The Centre is supported by a CRC five year rolling programme grant and is resourced and equipped to maintain its international academic standing. There are currently 72 staff and eight University of London PhD students working in the Centre.

We are looking to recruit a scientist of international research standing in pharmacology and therapeutics to direct the Centre's research programme. The person appointed will also have substantial experience of liaising with the pharmaceutical industry which may include employment at a senior level within a pharmaceutical or biotechnology company.

*Roger Stephens and Associates have been contracted to assist in recruitment to this post. Potential applicants are asked to contact Dr Mike Hall of Roger Stephens, tel: 01524 276460, fax: 01524 276463 for an information pack and further details regarding the post and the application procedure.*

*The closing date for applications is 30th April 1997.*

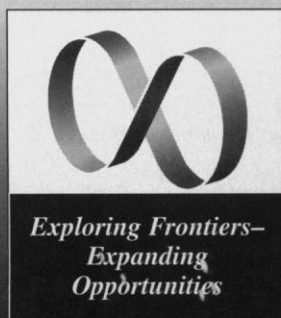


**cancer  
research  
campaign**



Fighting cancer on all fronts





# Mark Your Calendar for the 1998 AAAS Meeting 1998 AAAS Annual Meeting and Science Innovation Exposition February 12-17, 1998 Pennsylvania Convention Center Philadelphia, Pennsylvania

## 1998 AAAS Meeting Program Committee

**Mildred S. Dresselhaus**,  
Massachusetts Institute of  
Technology  
1998 Program Chair  
**M.R.C. Greenwood**,  
University of California-Santa  
Cruz  
1999 Program Chair  
**C. Eugene Allen**, University  
of Minnesota  
**Lewis M. Branscomb**,  
Harvard University  
**Halina S. Brown**, Clark  
University  
**Ronald L. Graham**, AT&T  
Bell Laboratories  
**Lawrence Grossman**, Johns  
Hopkins University  
**Richard T. Johnson**, Johns  
Hopkins University Hospital  
**Judith Kildow**, Massachusetts  
Institute of Technology  
**Alvin L. Kwiram**, University  
of Washington  
**Orie L. Loucks**, Miami  
University  
**Julie Haynes Lutz**,  
Washington State University  
**Jane Maienschein**, Arizona  
State University  
**Robert P. Morgan**,  
Washington University  
**Robert M. Nerem**, Georgia  
Institute of Technology  
**Warren M. Washington**,  
National Center for  
Atmospheric Research  
**Harry Woolf**, Institute for  
Advanced Study

## The 1998 AAAS Meeting—the premier event for science and technical professionals—where you can...

- ✓ find out about the latest issues and emerging research from all areas of science
- ✓ learn of fertile synergies between disciplines
- ✓ exchange and publicize new developments
- ✓ debate critical issues in science policy and education
- ✓ meet leaders in your field and network with your colleagues

### Proposed Theme Tracks:

- Emerging Science: Transforming the Next Generation
- Communication: Technology, Policy, and Society
- Energy: What Does the Future Hold?
- The Changing Environment of Science
- The Changing Science of Environment
- Discovering Biological Diversity: From Conservatories to Molecular Prospecting
- Education into the Next Century

### General Tracks:

- Communicating Science
- Environment, Food, and Natural Resources
- From Molecules to Cells
- Global Change/Earth Systems Science
- Human Development, Language, and Society
- Life Science and the Science of Life
- Neurobiology, Brain, and Behavior
- Physical Sciences
- Public Health and Medicine
- Science, Engineering, and Public Policy
- Science and Society

### Science Innovation:

A series of about 15 sessions, addressing leading edge research and applications in molecular biology, medicine, physiology, instrumentation, and computer science.

**The 1998 Preliminary Program will be available in September.**  
Complete this coupon to reserve your copy.

## 1998 AAAS MEETING

Please send me the following information:

- ☐ Preliminary Program and Registration Forms  
☐ Career Development Program  
☐ Call for Poster Papers Forms

- ☐ Student Session Aide Application  
☐ Exhibitor Prospectus and Contract

Please type or print clearly

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_ COUNTRY \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

Mail: AAAS, Meetings Dept., 1200 New York Avenue, NW, Washington, DC 20005

Phone: (202) 326-6450 FAX: (202) 289-4021 Email: [confinfo@aaas.org](mailto:confinfo@aaas.org)

Meetings Home Page:

<http://www.aaas.org/meetings/meetings.htm>

Scope Online: <http://www.aaas.org/meetings/scope>



AMERICAN ASSOCIATION FOR THE  
ADVANCEMENT OF SCIENCE

INQA1

## Ruprecht-Karls-Universität Heidelberg

### Full Professor (C4)

#### Embryonic Stem Cell Technology and Experimental Genetics

The School of Medicine at the University of Heidelberg is seeking an outstanding individual as a full professor with active research interests in the fields of embryonic stem (ES) cell technology and experimental genetics. The successful applicant will also head a new institute for the production of transgenic animals.

Candidates are expected to have practical experience in research involving ES cells and the generation of transgenic animals, and to have an interest in further developing these techniques. The institute for the production of transgenic animals will consult and cooperate with other Departments of the Medical School, the Department of Biology, the Center for Molecular Biology (ZMBH) and the Max-Planck Institute for Medical Research, which are located on the same campus.

Please direct applications, including a curriculum vitae, a list of publications, an outline of future research plans, names of references, and no more than ten selected reprints to the: **Dekan der Medizinischen Fakultät Heidelberg, Im Neuenheimer Feld 346, D - 69120 Heidelberg, Germany** within six weeks after publication of this advertisement.

For further information contact **K.-A. Nave** (nave@sun0.urz.uni-heidelberg.de) or **Peter Seeburg** (seeburg@sun0.urz.uni-heidelberg.de).

## Tenure-Track Position

### Pulmonary and Critical Care Medicine Branch

#### NHLBI, NIH

The Pulmonary and Critical Care Medicine Branch (P-CCMB) of the National Heart, Lung, and Blood Institute is recruiting a junior clinical research scientist with an M.D. and board certification or eligibility in Pulmonary Disease and/or Critical Care Medicine to initiate an independent tenure-track program of combined clinical and laboratory research. The P-CCMB provides significant opportunities within the NIH Clinical Center for patient-oriented clinical research and it is expected that the successful candidate will take full advantage of these resources. The applicant will oversee and develop clinical protocols in pulmonary disease and share in the clinical responsibilities of the Branch. The applicant should have experience in basic and/or clinical research and an established record of publication in peer-reviewed journals in basic and/or clinical research. The successful candidate, although not necessarily having had experience in clinical research, will be expected to initiate, in addition to any laboratory-based research, a strong program of patient-oriented research in pulmonary disease. For individuals with clinical experience but without formal training in clinical research, programs and resources are available to aid in acquisition of the necessary knowledge and skills. Questions regarding the clinical research opportunities should be referred to **Joel Moss, M.D., Ph.D., Chief, P-CCMB, at 301-496-1597**. Salary will be based on experience and will be competitive. Applications must be received by July 31, 1997.

To apply, please send a curriculum vitae, bibliography, brief statement of research interests, and a patient-oriented, clinical research proposal detailing plans for utilization of the clinical research opportunities at the Clinical Center (if different from the research statement). In addition, three letters of recommendation should be sent to the address given below. The selection committee will weigh heavily the clinical research proposal in the choice of applicants for interviews and in the selection of the successful candidate. The clinical research proposal is especially important for those applicants who have not already conducted patient-oriented clinical research, but would like to share in the opportunities available at the NIH Clinical Center to combine patient-oriented and laboratory-based research.

**Office of the Scientific Director, NHLBI**

**Building 10, Room 7N214**

**10 Center Drive, MSC 1668**

**Bethesda, MD 20892-1668**

*NIH is an Equal Opportunity Employer*



## GLOBAL CAREER OPPORTUNITIES

### Postdoctoral Scientist

#### Molecular Neurobiology/Functional Genomics

Bayer, a worldwide leader in the discovery and development of innovative pharmaceuticals, has immediate career opportunities for Postdoctoral Fellows at the Central Research facility in Leverkusen.

The successful candidate will join a research group focused on exploring the molecular biology of G-protein coupled receptors. The project involves cloning and functional characterization of novel receptors and the identification of natural ligands in the CNS.

The activities of the research group form an essential part of a multidisciplinary effort aiming to develop new and effective therapies for a wide variety of human CNS-diseases.

Applicants should have a strong expertise in Molecular Biology and Neurobiology.

Candidates should send a brief description of research experience, CV including a list of publications and names of two references to:

**Bayer AG**  
**Personnelmarketing**  
**attn. Frau Redmer**  
**ref. no. 266**  
**D-51368 Leverkusen.**

## UNIVERSITY OF MICHIGAN Postdoctoral Positions

The University of Michigan Comprehensive Cancer Center and Department of Dermatology invite applications for two postdoctoral positions in a newly created Laboratory of Cutaneous Oncology.

One project is aimed at identifying and characterizing growth factor signaling pathways involved in the initiation and malignant progression of epithelial tumors, with emphasis on the IGF-I receptor and downstream targets. A second project will focus on exploring the role of the sonic hedgehog pathway in epidermal development and neoplasia. Applicants should have a strong background in the broad areas of cell and molecular biology, with additional expertise in signal transduction highly desirable. Preference will be given to those individuals who can join the laboratory on, or shortly after, July 7, 1997. Send curriculum vitae and names of three references to:

**Dr. Andrzej Dlugosz**  
**University of Michigan Comprehensive Cancer Center**  
**and Department of Dermatology**  
**1910 Taubman Center**  
**Ann Arbor, Michigan 48109-0314**  
**DLUGOSZA@umich.edu**

*We encourage applications from candidates who will enrich and contribute to the cultural diversity of our University community.*





## ASSOCIATE OR STAFF SCIENTIST PRECLINICAL PHARMACOKINETICS & DRUG DISPOSITION

**Cytel Corporation** is a publicly held biotechnology company located in San Diego, CA. We are committed to the discovery, design and development of immunotherapeutics for the treatment of serious human diseases.

We have an opportunity for a versatile, hands-on experimental scientist with expertise in preclinical pharmacokinetics and drug metabolism. Responsibilities include the design, implementation and interpretation of pharmacology, pharmacokinetic or metabolism studies that support late stage research and development projects. The successful candidate will work closely with project teams to provide key data necessary for providing timely assessment of therapeutic candidates in our inflammation and immunology programs. Requires either a Ph.D. in Pharmacokinetics or Pharmacology with 5+ years of experience or a Master's degree in Pharmacokinetics with 7+ years of relevant experience. Animal handling expertise and the ability to devise bioavailability protocols, apply appropriate bioanalytical methods, evaluate data and calculate PK parameters are essential.

Cytel offers a challenging environment, competitive salary and benefit programs, as well as stock options and an employee stock purchase plan. Qualified candidates, please send your curriculum vitae to attention of Job Code: 41/9, **Cytel Corporation, 3525 John Hopkins Court, San Diego, CA 92121-1121**. We are an equal opportunity employer.



## THE UNIVERSITY OF CHICAGO DEPARTMENT OF PATHOLOGY

### FACULTY POSITION IN VASCULAR PATHOBIOLOGY

The Department of Pathology invites applications for a tenure track position for a program in the molecular genetic mechanisms of vascular pathobiology. Appointment will be at a level commensurate with the experience and accomplishments of the successful appointee. Candidates should possess an M.D. and/or Ph.D. degree.

Major themes of interest are atherosclerosis, thrombosis or angiogenesis. Major criteria for consideration will be evidence of creative scholarship and a strong potential for research funding. The Department of Pathology has a rich history in the study of atherosclerosis and is the base department for a training grant in cardiovascular pathophysiology. An attractive feature of these positions is the opportunity to interact with a wide variety of research programs in molecular and cell biology both within the Department and in the Division of the Biological Sciences. All faculty positions require a commitment to teaching. Salary will be competitive and negotiable. Excellent benefits package included.

Applicants should send a letter of application, full curriculum vitae, a statement of research interests, the names and addresses of three referees, and copies of three publications to: **Godfrey S. Getz, M.D., Ph.D., Chairman, Department of Pathology, MC 3083, The University of Chicago, 5841 S. Maryland Avenue, Chicago, IL 60637**.



**THE UNIVERSITY  
OF CHICAGO**

An Affirmative Action/Equal Opportunity Employer.

## NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM LABORATORY OF NEUROGENETICS

The Laboratory of Neurogenetics has two postdoctoral fellow positions available in its Section on Population Genetics and Linkage. Each successful candidate will assume an active role in genetic linkage analysis of impulsivity, alcoholism and psychotherapy in large pedigrees sampled from population isolates. The research will involve high throughput genotyping of microsatellite DNA polymorphisms using automated DNA sequencers, and statistical analysis of genetic linkage using a variety of approaches. Candidates should have less than five years postdoctoral experience and should provide a resume and letter of interest, by May 31, to **Dr. Jefferey Long, National Institute on Alcohol Abuse and Alcoholism, NIH, 12501 Washington Avenue, Rockville, Maryland 20852**, or by FAX at (301) 443-8579 or by email [jeff\\_long@nih.gov](mailto:jeff_long@nih.gov)

*The NIH is an Equal Opportunity Employer*

The University of Pittsburgh Cancer Institute (UPCI) is seeking a Deputy Director for Basic Research with expertise in either molecular biology or cell biology. The Institute has made a major commitment for this recruitment including an endowed chair, substantial funds for start-up and recruitment of other faculty, and laboratory facilities. UPCI is an NCI-designated comprehensive cancer center, ranked in the top five for funding among all NCI-designated centers. UPCI maintains basic research programs in the areas of cell biology, molecular oncology, molecular carcinogenesis, immunology and experimental therapeutics. UPCI basic research facilities include 88,000 square feet of laboratory space and state-of-the-art shared facilities including: cytogenetics, flow cytometry, hybridoma, protein sequencing and synthesis, cell and tissue imaging, oligonucleotide synthesis, specific pathogen free animal facility, transgenic mouse facility, among others. Candidates should be tenurable as either associate or full professor, with a proven track record in NIH funding. Candidates should be recognized as national leaders in the field of molecular oncology or cell biology, with the ability to serve as a senior leader of the Institute, as a mentor for junior faculty and as the focal point for program development and collaboration. Interested candidates should send a letter of interest and curriculum vitae to: **Ronald B. Herberman, M.D., Director, University of Pittsburgh Cancer Institute, Associate Vice Chancellor for Research, Health Sciences, Professor of Medicine and Pathology, Suite 201, Liliane Kaufmann Building, 3471 Fifth Avenue, Pittsburgh, PA 15213**.

## DIRECTOR, GERALDINE BRUSH CANCER RESEARCH INSTITUTE

The **Geraldine Brush Cancer Research Institute (GBCRI)**, a division of the California Pacific Medical Center Research Institute (CPMCRI), invites applications for the Director's position. The Research Institute is part of California Pacific Medical Center, a 1,100-licensed-bed academic medical center affiliated with the Sutter/CHS healthcare system. The investigators of GBCRI, mainly supported by extramural funding, conduct research in a variety of areas related to cancer biology. Strong collaborative relations exist with the breast cancer research program at the University of California, San Francisco, including an ongoing Program Project grant and a SPORC grant, both funded by the National Cancer Institute.

Applicants must have a Ph.D. or M.D., an active research program in cancer supported by extramural funding, and a strong record of scientific achievement. The successful candidate should have the vision and interpersonal skills essential to further develop and to lead GBCRI research into the next century.

We offer a competitive compensation and excellent benefits package. Please send resume, a history of research activities and support, a short description of future research objectives, and the names of three references to: **California Pacific Medical Center, Human Resources, Attn: D. Henderson, P.O. Box 7999, San Francisco, CA 94120** or FAX (415) 885-8633. EOE.

**CALIFORNIA  
PACIFIC**  
MEDICAL CENTER

## POSITIONS OPEN

There are two positions available at the Lankenau Medical Research Center located in suburban Philadelphia. They are as follows:

### POSTDOCTORAL POSITION

A **POSTDOCTORAL/RESEARCH ASSOCIATE** position is available to study the mechanism by which elevated polyamine levels cause increased susceptibility to skin cancer. Several transgenic mouse models have been developed in which ornithine decarboxylase expression can be overexpressed or inhibited in specific populations of keratinocytes (Megosh et al., *Cancer Research* 55:4205-4209, 1995) which will be used to study 1) how polyamines regulate the activity of epidermal stem cells and hair follicle keratinocytes, and 2) how important multi-component complexes involved in transcription and DNA repair are affected by polyamines.

Reply to: **Thomas G. O'Brien, Ph.D.**

### POSTDOCTORAL POSITION

A **POSTDOCTORAL/RESEARCH ASSOCIATE** position is available to study the regulation of intercellular junctional proteins by protein kinase C phosphorylation. Research will focus on the regulation of transepithelial permeability by phorbol esters and cytokines (*Exptl. Cell Res.* 227:12-22, 1996; *Am. J. Physiol.* 270:F869, 1996).

Reply to: **James M. Mullin, Ph.D.**

Interested applicants are requested to send a curriculum vitae, statement of research interests and accomplishments, and three letters of reference to the attention of the appropriate investigator as listed above, c/o The Lankenau Medical Research Center, 100 Lancaster Avenue, Wynnewood, PA 19096. FAX: 610-645-8299. *Equal Opportunity Employer.*

Two **POSTDOCTORAL FELLOW** positions are available immediately at UCSF in the San Francisco General Hospital Division of Infectious Diseases. Research will focus on investigating the mechanisms of beta-lactam antibiotic resistance in *Staphylococcus aureus*. Specific areas of research include characterizing the signal-transduction pathway for inducible proteins mediating beta-lactam resistance, regulation of the expression of staphylococcal penicillin binding proteins, and determining structure-function relationships. For both positions, previous training with protein biochemistry techniques including SDS-PAGE, immunoblotting, and immunoprecipitation is required. Hands-on experience with molecular biology and recombinant DNA techniques as well as knowledge of various mutagenesis techniques (e.g., chemical, transposon, site-directed) is essential; experience with Gram positive organisms is preferred. Send curriculum vitae and three references to: **Henry F. Chambers, M.D., Chief, Division of Infectious Diseases, San Francisco General Hospital, Box 0811, University of California San Francisco School of Medicine, Department of Medicine, 3rd and Parnassus Avenues, San Francisco, CA 94143-0811. Telephone: 415-206-8666; FAX: 415-206-6015; Email: [chipc@itsa.ucsf.edu](mailto:chipc@itsa.ucsf.edu). UCSF is an Affirmative Action/Equal Opportunity Employer. The University undertakes affirmative action to assure equal employment opportunity for underutilized minorities and women, for persons with disabilities, and for Vietnam-era veterans and special disabled veterans.**

**POSTDOCTORAL POSITION** in Microbiology and Food Safety, available immediately to participate with a multidisciplinary team investigating on-farm ecology of food-borne pathogens. Techniques include emerging microbiological diagnostic techniques and a wide range of ecology and pathogenic investigations. Salary range begins at \$29,000 and will be commensurate with experience. Qualified and interested candidates should send curriculum vitae and names and addresses of three references to: **Jerry R. Gillespie, Director, Food Animal Health & Management Center, College of Veterinary Medicine, Kansas State University, Manhattan, KS 66506. Telephone: 913-532-4258; FAX: 913-532-4288. Kansas State University is an Equal Opportunity Employer. Kansas State University actively seeks diversity among its employees.**

### POSTDOCTORAL POSITION MOLECULAR NEUROBIOLOGY

Position available immediately to study the regulation of neurotransmitter genes during development and disease. Candidate must have previous experience in molecular biology/protein chemistry. Send curriculum vitae and names of three references to: **Dr. Lorraine Iacovitti, Department of Neurobiology and Anatomy, Mail Stop 408, Allegheny University of the Health Sciences, Broad and Vine, Philadelphia, PA 19102.**

## POSITIONS OPEN

A **POSTDOCTORAL FELLOWSHIP** is available immediately for a person with experience in cell biology and molecular biology with an interest in pursuing basic research on non-viral, ligand mediated gene delivery methodologies. Knowledge of eukaryotic intracellular trafficking mechanisms helpful. Successful candidate to join group of Ph.D.s and M.D.s involved in basic cardiovascular research at the Texas Heart Institute. Please send curriculum vitae and names and telephone numbers of three references to: **Ms. Carolyn Williams, Administrative Secretary, Department of Vascular Cell Biology, Texas Heart Institute, P.O. Box 20345, Mail Code 2-255, Houston, TX 77225.**

**POSTDOCTORAL POSITION** is available to study protein-protein and protein-membrane interactions, and mechanisms of receptor actions using techniques of computer simulations and modeling. Applicants should have a strong background in statistical mechanics and a strong interest in structural biology and biochemistry. Send curriculum vitae and arrange for three letters of reference to be sent to: **Prof. Andrew Pohorille, Department of Pharmaceutical Chemistry, University of California San Francisco, San Francisco, CA 94143. Email: [pohor@cgl.ucsf.edu](mailto:pohor@cgl.ucsf.edu). UCSF is an Equal Opportunity Employer.**

## ANNOUNCEMENTS

### PRODUCT DEVELOPMENT

Submission of innovative ideas, proposals and novel concepts relating to anesthetics, analgesics, and cancer treatment are being invited for clinical use. Accepted applications will be pursued further for patents and clinical trials by our well established group. Applications should ideally have a brief description of the proposed drug/instrument or technique for development and the names of the original inventors. Patented products which need further support will also be considered for clinical trials. All submitted information will be held confidential and a reply will be given within 20 days of receipt. Contact: **C. E. Romero, VP Product Development, Broadview Consultants Inc., 70 Fifth Avenue, New Rochelle, NY 10801.**

## CONFERENCE

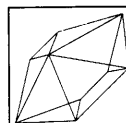
### CONTROL OF GENES, DEVELOPMENT, AND PLASTICITY BY NEURAL IMPULSES

Bringing together new research on gene regulation by neural impulse activity, with research on cell adhesion molecules, intracellular signaling, and synaptic plasticity, this **CONFERENCE** explores the molecules and mechanisms that coordinate the structure and function of the brain. June 9, 10, 1997 at the NIH, Bethesda, Maryland. Organizer: **Dr. R. Douglas Fields, NIH, NICHD; Telephone: 301-480-3209; FAX: 301-496-9630; Email: [fields@helix.nih.gov](mailto:fields@helix.nih.gov); Internet address: [http://mecko.nichd.nih.gov/LDN\\_Labs/Fields.html](http://mecko.nichd.nih.gov/LDN_Labs/Fields.html).**

## GRANTS

Pre-Proposals—Deadline: 1 July 1997. International Foundation for Ethical Research (IFER) has **GRANTS** available for research into alternatives to the use of live animals in research, testing and education. Projects must take into account the three R's: Refinement, Reduction, and Replacement plus a fourth R: Responsibility. For information and format write: **IFER, 53 West Jackson Boulevard, Chicago, IL 60604. Telephone: 312-427-6025.**

## MARKETPLACE



### PROTEIN, PEPTIDE & NUCLEIC ACID CRYSTAL GROWTH

**FREE CATALOG & SAMPLE**  
800-452-3899 Fax (714)-5861453  
E-mail: [xtalrox@aol.com](mailto:xtalrox@aol.com)  
<http://www.hamptonresearch.com>

**HAMPTON  
RESEARCH**

Circle No. 2 on Readers' Service Card

## MARKETPLACE

**Custom Polyclonal Antibodies**  
BEST PRICES • BEST ANIMALS  
**ANIMAL PHARM SERVICES**  
(800)808-0550

Circle No. 64 on Readers' Service Card

**ATLANTIC ANTIBODIES**  
Custom Immunization Service  
• Custom Polyclonal Antiserum  
• Normal Serum  
• Quality Control Testing  
• Research Support Services  
TEL 207-856-6151 FAX 207-856-6751

Circle No. 19 on Readers' Service Card

**Automated Sequence Quality Plasmids**

**6 MINUTE  
MINIPREPS**  
all tubes supplied! all reagents ready to use!  
**MO BIO Labs, Inc.**  
800-606-6246/619-944-7190/fax 619-944-7134  
email: [orders@mobio.com](mailto:orders@mobio.com) / <http://www.mobio.com>

Circle No. 12 on Readers' Service Card

**DNA SYNTHESIS**  
% \$0.80 per base for 5-10 OD  
**DNA SEQUENCING**  
% As low as 50¢ per base  
**Retrogen**  
TEL: 1-800-RETROGEN • [Retrogen@electricity.com](mailto:Retrogen@electricity.com)

Circle No. 13 on Readers' Service Card

Please call **SCIENTECH CORP.** for

1. Highly Sensitive p53-based Anti-Apoptosis Assay Kit
2. Primary Baby Rat Kidney (BRK) Cells
3. Custom Adenovirus Vector Construction for Gene Therapy & Mammalian Gene Expression

T: 1-800-645-0089 F: 314-645-0177

Circle No. 38 on Readers' Service Card

**www.ultralum.com**

**FREE  
UV  
EQUIPMENT  
CATALOG**

**Electronic UV  
Transilluminators**  
Complete selection of sizes and types  
US patent no. 5434478  
**ULTRA•LUM**  
Innovative Ultraviolet Technology  
Paramount, CA USA  
(562) 529-5959 fax: (562) 529-5950 e-mail: [info@ultralum.com](mailto:info@ultralum.com)

Circle No. 37 on Readers' Service Card

**NEW  
LOW  
PRICES**

**VOLUME DNA SEQUENCING  
CALL (800) 720-GENE**

- HIGH-THROUGHPUT  
GENOME SEQUENCING
- NO ROYALTIES  
OR LICENSE FEES
- SHOTGUN SEQUENCING
- LARGE & SMALL  
PROJECTS ACCEPTED
- EXPERTISE

**DNA SEQUENCING**  
**seqwright**  
THE GENE DISCOVERY SUPPORT LAB

(713) 528-4363 PHONE  
(713) 528-6232 FAX  
[www.seqwright.com](http://www.seqwright.com)  
email: [seq@blkbbox.com](mailto:seq@blkbbox.com)

Circle No. 48 on Readers' Service Card



## MARKETPLACE

CUSTOM ANTIBODIES  
TO PEPTIDES AND PROTEINS

- Purification • Conjugation
- ELISA Titration



HTI BIO-PRODUCTS, INC.  
Phone (800) 481-9737  
Fax (619) 788-9694  
e-mail antibodies@htibio.com  
http://www.htibio.com

Circle No. 68 on Readers' Service Card

Now just \$1.00 a base...  
with no set-up charge.\*

\* 50 nmole scale, standard purity

GIBCO BRL  
**CUSTOM PRIMERS™**  
**\$1.00**  
PER BASE

- High quality
- High capacity
- Fast turnaround

Internet ordering on the World Wide Web:  
http://www.lifetech.com

Call for easy fax ordering form: (800) 828-6686

LIFE TECHNOLOGIES, Inc.  
Producer of Gibco BRL Products

Circle No. 17 on Readers' Service Card

CUSTOM PEPTIDES  
& ANTIBODIES

Value added custom services at  
competitive prices:

- Peptide Synthesis
- Peptide Libraries
- Polyclonal Antibodies

Let us quote your next peptide  
project and get a free T-shirt.

800.456.1403 • Fax: 502.968.1000  
http://www.peptide.com

**Advanced ChemTech**

Circle No. 49 on Readers' Service Card

NEW for 1997

Cell Systems

Serum-Free Human Cell Systems  
Vascular Smooth Muscle Cells

1-800-697-1211

www.cellsystems.com

Circle No. 11 on Readers' Service Card

## MARKETPLACE

Custom Primers - 48 hr turnaround: \$1.00/base  
5 ODU - Standard Purity - Ready to Use



ransom hill bioscience, inc.  
http://www.ransomhill.com  
no setup - no minimum - no baloney!  
internet: visla@ix.netcom.com fax: (800) 597-8509

Circle No. 10 on Readers' Service Card

**XX IDT**  
INTEGRATED DNA TECHNOLOGIES, INC.

## Custom DNA Synthesis

95¢ / Base

100 nmole Scale  
No Set-up Fee  
Column Purified  
24 Hour Shipping

Ask about our  
group discount programs!

E-mail: orders@idtdna.com  
Web Site: http://www.idtdna.com

Fax: 1-319-645-2921  
Phone: 1-800-328-2661

Circle No. 7 on Readers' Service Card

## CUSTOM DNA SYNTHESIS

PURE &amp; SIMPLE

- Superb Technical Support

- Impeccable Quality

- World's Fastest Service

- Cap Gel & TOF Mass Spec

\* Some restrictions apply. Please call for details.

**\$1.19\***  
per base  
\$10 setup  
50 nmole  
scale

## MIDLAND

STILL THE UNDISPUTED #1 CUSTOM DNA SYNTHESIS SERVICE

THE MIDLAND CERTIFIED REAGENT COMPANY  
Phone 1-800-247-8766 FAX 915-694-2387  
email mrcr@oligos.com

Circle No. 8 on Readers' Service Card

Custom Peptides  
And Antibodies

100% Guarantee; No Antibody, No \$\$  
**Alpha Diagnostic Intl. Inc.**

(800) 786-5777; Fax (210) 521-8346  
Email: info@4adi.com  
WebSite: www.4adi.com

Circle No. 16 on Readers' Service Card



PEPTIDE + ANTIBODY  
HIGH QUALITY \$1200

β-AMYLOID(1-40) \$200/mg

ANASPEC

800-452-5530 // service@anaspec.com

Circle No. 23 on Readers' Service Card

## MARKETPLACE

## EASY WEB ORDERING

http://www.biosyn.com  
biosyn@onramp.net

CUSTOM PRIMERS  
PURIFIED

NO SET UP FEES  
**65¢**  
/base

50 nmole  
Full QC  
Guaranteed Quality  
Just order > 400 bases  
at the same time

CUSTOM PEPTIDES  
FREE MASS SPEC

NO SET UP FEES  
**15.00**  
/residue

10-20 mgs  
8-15 residues  
Shipped in 5 days

ANTIPEPTIDES ANTIBODY  
PRODUCTION SERVICES & MORE

BIO SYNTHESIS

TEL: 800-227-0627 FAX: 972-420-0442

Circle No. 9 on Readers' Service Card

Custom  
Polyclonal  
Services

BAbCO is your best choice.

Proven Protocols  
Immediate Project Initiation  
Wide Variety of Species

BAbCO

BERKELEY ANTIBODY COMPANY

800-922-2226  
service@babco.com  
www.babco.com

Circle No. 40 on Readers' Service Card

Widely  
Recognized  
Original &  
Guaranteed

**KlenTaq1**

8¢/u  
Truncated  
Taq DNA  
Polymerase  
Withstand 99°C

US Pat # 5,436,149

Call: **Ab Peptides** 1-800-383-3362  
Fax: 314-968-8988 abpeps@icon-stl.net

Circle No. 5 on Readers' Service Card

Site-Directed  
Mutagenesis  
as low as \$500

1-800-654-4671  
http://www.ana-gen.com

ANA-GEN  
Ana-Gen Technologies, Inc.

Circle No. 45 on Readers' Service Card

## Custom DNA

Purified & Delivered in 48 Hours

\$1.20 per base • Purified  
http://www.resgen.com

**Research Genetics, Inc.**  
1-800-533-4363

Circle No. 6 on Readers' Service Card



# A TASTY REDUCTION IN THE PRICE OF ZUCCHANA.



**Zucchini**  
**60¢**  
per base

## SUCH A DEAL ON DNA. JUST 60¢ A BASE.

Attention shoppers. You don't have to settle for second best, to save a bunch. Buy the Zucchini, and you get both price and quality. No compromises.

Operon now makes custom DNA on the 0.05  $\mu$ mole scale for just 60¢ per base, with a \$5 set-up fee. Larger scales are also very affordable.

We offer a complete range of modifications, so you can enjoy "one-stop-shopping" for all your custom DNA needs. And at Operon, you can order by phone, fax, e-mail or just visit our

web site at [www.operon.com](http://www.operon.com). Shopping for custom DNA has never been easier.

Fast turnaround, high purity, unconditional

guarantee, and great prices. No wonder Operon is the market leader in custom oligos. So if you're in the market for DNA, put the Zucchini on your shopping list today! Operon. Anything is possible.

Custom DNA Synthesis Prices

Scale	Price/base	Set-up
0.05 $\mu$ mole	\$0.60	\$5.00
0.2 $\mu$ mole	\$1.20	\$10.00
1.0 $\mu$ mole	\$2.40	\$20.00



# OPERON

WORLD'S LEADING SUPPLIER OF SYNTHETIC DNA

Phone: (800) 688-2248 or (510) 865-8644 • Fax: (510) 865-5255 • e-mail: [dna@operon.com](mailto:dna@operon.com) • Web: <http://www.operon.com>

©1996 Operon Technologies, Inc., 1000 Atlantic Avenue, Alameda, CA 94501, USA. NIHBP 263-00033233

Circle No. 70 on Readers' Service Card



### Quantikine

ANG	IL-10
CNTF	IL-11
EGF	IL-12
ENA-78*	IL-12 p40*
FGF basic	IL-13
FGF-4	IL-15
G-CSF	LIF
GM-CSF	M-CSF
sgp130	MCP-1
GRO $\alpha$	MIP-1 $\alpha$
HGF	MIP-1 $\beta$
IFN- $\gamma$	OSM
IL-1 $\alpha$	PDGF-AB
IL-1 $\beta$	RANTES
IL-1ra	SCF
IL-1 sRII	SLPI
IL-2	TGF- $\beta$ 1
IL-2 sR $\alpha$	TGF- $\beta$ 2
IL-3	TNF- $\alpha$
IL-4	TNF- $\beta$
IL-4 sR $\alpha$	sTNF RI
IL-5	sTNF RII
IL-6	Tpo*
IL-6 sR	VEGF
IL-8	

### Quantikine HS (high sensitivity)

FGF basic	IL-6
G-CSF	IL-7
GM-CSF	IL-10
IL-1 $\beta$	IL-12
IL-3	TNF- $\alpha$
IL-4	

### Quantikine M (mouse)

GM-CSF	IL-13
IFN- $\gamma$	KC
IL-1 $\beta$	MIP-1 $\alpha$ *
IL-2	MIP-2
IL-4	TNF- $\alpha$
IL-6	Tpo*
IL-10	VEGF

\* denotes NEW

**R&D  
SYSTEMS**

**1-800-343-7475**

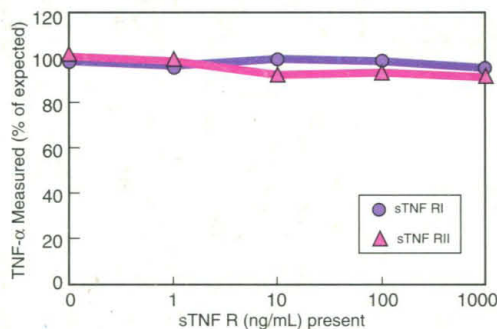
# Does your Cytokine ELISA give Accurate Measurements?

It does if it's a  
**Quantikine™**

## Is your ELISA measuring the cytokine and only the cytokine?

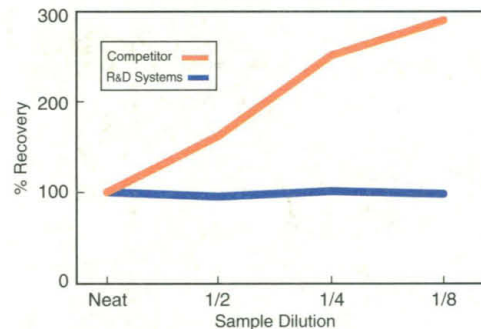
Quantikine Immunoassays are designed to eliminate the effects of cross-reactivity and interference. The lack of cross-reactivity establishes the ability to detect a single cytokine in a complex sample. The lack of interference demonstrates that other substances do not modify the antigen-antibody interaction.

### Cross-reactivity



TNF- $\alpha$  was measured with the Quantikine human TNF- $\alpha$  assay in the presence or absence of sTNF RI or sTNF RII. Concentrations of TNF- $\alpha$  were 125-1000pg/mL. Results demonstrate that neither TNF receptor positively or negatively affects the TNF- $\alpha$  concentration in the Quantikine human TNF- $\alpha$  Immunoassay.

### Sample Recovery



A spiked serum sample was serially diluted and run in the Quantikine mouse IL-2 ELISA and a competitor's mouse IL-2 ELISA. Results are based on the percent recovery of the diluted sample.

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

#### North America

**R&D Systems, Inc.**  
614 McKinley Place NE  
Minneapolis, MN 55413, USA.  
Tel: 612 379-2956  
Fax: 612 379-6580  
info@randsystems.com

#### Europe

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

#### Germany

**R&D Systems GmbH**  
Borsigstrasse 7  
65205 Wiesbaden, Germany  
Tel: +49 06122 90980  
Fax: +49 06122 909819  
info@randsystems.co.uk

#### Japan

**Funakoshi, Co., Ltd.**  
9-7, 2-Chome  
Hongo, Bunkyo-ku  
Tokyo 113, Japan  
Tel: 81-3 5684-1622  
Fax: 81-3 5684-1633

**International Distributors** – Argentina: (54-1) 942-3654. Australia: (61-2) 9521-2177. Austria: 01 292 35 27.  
Chile: (56-2) 671-9369. Greece: 031 322 525. Hong Kong: (852) 2649-9988. Israel: (972-9) 764-8787. Italy: 39 2 25 75 377.  
Korea: (82-02) 569-0781. Mexico: (52-5) 612-0085. New Zealand: (64-9) 377-3336. Spain: 34 1 535 39 60. Poland: 48 22 720 44 54.  
Portugal: 01 352 87 74. South Africa: 021 981 1560. Taiwan: (866-02) 368-3600. Venezuela: (58-2) 239-07-80.

**Europe Free Phone** – Belgique/België: 0800 10 468. Danmark: 80 01 85 92. France: 0800 90 72 49.  
Nederland: 060 225607. Norge: 800 11033. Sverige: 020 79 31 49. Switzerland: 0800 55 2482.



Circle No. 60 on Readers' Service Card