

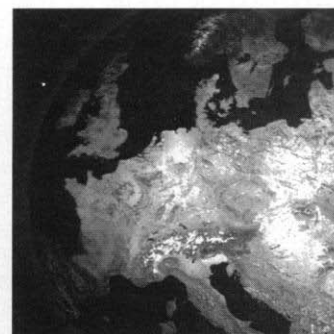
European Scientists:

*for Immediate Service  
and Instant Response*  
contact Science International

Authors, Subscribers and  
Advertisers can contact the  
European team at:

Science International (Europe Office),  
Thomas House, 14 George IV Street,  
Cambridge, CB2 1HH, UK.  
Tel: +44 (0) 1223 302067  
Fax: +44 (0) 1223 302068  
Email: science@science-int.co.uk

**SCIENCE**



## Shearwater Polymers, Inc.

### *POLY(ETHYLENE GLYCOL) AND DERIVATIVES*

*FUNCTIONALIZED BIOCOMPATIBLE POLYMERS FOR PROTEIN  
PEGYLATION, PHARMACEUTICAL AND BIOTECHNICAL APPLICATIONS*

#### Amine Reactive Derivatives

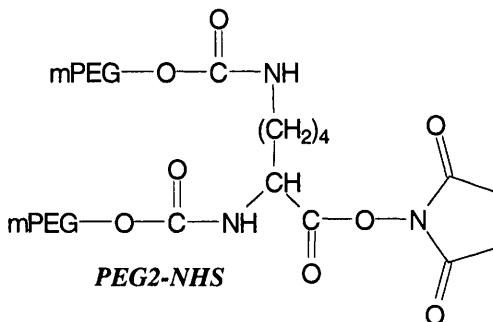
- Succinimidyl Succinate (SS)
- Succinimidyl Propionate (SPA)
- Succinimidyl Carboxymethyl (SCM)
- PEG2 Succinimide (PEG2-NHS)
- Oxycarbonylimidazole (CDI)
- Nitrophenyl carbonate (NPC)
- Tresylate (TRES)
- Epoxide (EPOX)
- Aldehyde (ALD)
- Isocyanate (NCO)

#### Heterofunctional Derivatives

- $\omega$ -amino- $\alpha$ -carboxyl (NH<sub>2</sub>COOH)
- $\omega$ -hydroxyl- $\alpha$ -amine (HONH<sub>2</sub>)
- $\omega$ -hydroxyl- $\alpha$ -carboxyl (HOCOOH)
- NHS-Vinylsulfone (NHSVS)
- NHS-Maleimide (NHSMAL)

#### Sulphydryl Reactive Derivatives

- Vinyl Sulfone (VS)
- Maleimide (MAL)
- Orthopyridyl-disulfide (OPSS)



Call or write for full product listing  
(800) 457-1806 (U.S.)  
(205) 533-4201 (Int.)  
(205) 533-4805 (fax)  
2307 Spring Branch Rd.  
Huntsville, AL 35801  
swpolymers@aol.com (e-mail)

Visit our web site at <http://www.swpolymers.com/>

#### NEW SERVICES AVAILABLE

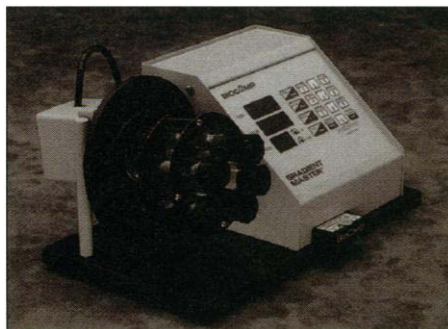
PEGylation and Methods  
Development for your proteins,  
peptides, small-molecule drugs  
and other bioactive molecules

## TECH.SIGHT

### Chemiluminescence Darkroom

The C-80 Darkroom features overhead ultraviolet (UV) (254 and 365 nm) and white light, a view port with UV safety glass and sliding cover, a charge-coupled device camera, an integral rotating colored filter wheel, and light-tight construction for low-light imaging. It can be combined with documentation systems for imaging and analysis of DNA, RNA, and protein gels; Southern, Northern, protein, dot, and slot blots; thin-layer chromatography, microtiter, and culture plates; chemiluminescence membranes and samples; and autoradiographs, photographs, and slides. **UVP.** For information call 800-452-6788 or circle 144 on the reader service card.

### PRODUCTS



having to wait for values to scroll by. **Accurate Chemical & Scientific.** For information call 516-333-2221 or circle 145 on the reader service card.

### Simulation Software

Simulink 2.1, Stateflow, and Real-Time Workshop 2.1 are software products for modeling, simulating, and prototyping real-time embedded systems applications. These products address the key engineering design tasks required for complex system development—from modeling initial design concepts through simulation and rapid prototyping. Simulink provides a graphical environment in which users can create block diagram models of their systems and then simulate their performance “live.” Simulink contains a wide

variety of predefined and extensible components for modeling nonlinear dynamic systems of any size or level of complexity, including continuous-time, discrete-time, and hybrid systems. Stateflow is a graphical tool for designing complex control and supervisory logic systems. It gives users the ability to model and simulate the behavior of complex reactive, event-based systems based on finite state machine theory. Real-Time Workshop 2.1 allows real-time execution of models from Simulink 2.1. This “code generation engine” automates all steps of code generation, including compilation, building, and downloading of code. **MathWorks.** For information call 508-647-7000 or circle 146 on the reader service card.

### Gradient Forming System

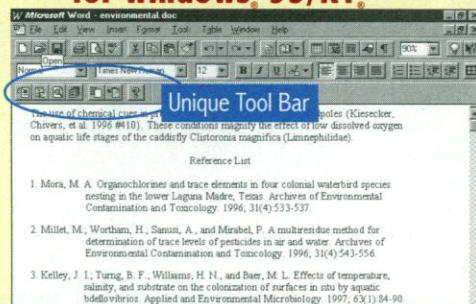
The Gradient Master creates absolutely reproducible gradients. This full-featured system makes use of tilted-tube technology and features a powerful microprocessor that controls the time, angle, and speed of rotation with superior accuracy, allowing gradients to be precisely mixed in seconds. Gradient Master provides fast entry of run parameters directly on the keyboard, without the user

### Swing-out Nosepiece

The U-SRE swing revolving microscope nosepiece makes changing magnification possible without altering the micro-manipulator settings. The nosepiece fits on the BX50WI microscope. Changing between low set-up magnification and high observation magnification is achieved by swinging the objective carrier in a longitudinal direction. Because there is no rotation of the nosepiece, objectives can be changed without

## Redefining One-Step Bibliographies

### NEW - Reference Manager V8 for Windows 95/NT



*“I have been using Reference Manager for 10 years and now can't imagine writing a manuscript or grant without it. The new Cite While You Write feature is a great addition to the program and makes the process of preparing manuscripts even easier than before.”*

Gray F. Crouse  
Department of Biology  
Emory University

### Easy One-Step Bibliographies

- ◆ Generate your manuscript and bibliography as a single document — in one step
- ◆ Never leave your word processor to identify citations
- ◆ Create in-text citations as author/date or numbered
- ◆ Format bibliographies for hundreds of journal styles, or create your own
- ◆ Revise your manuscript as many times as needed — even make complete style changes

### Exclusive features

- ◆ Perform key operations across multiple databases
- ◆ Link directly to the Web
- ◆ Store electronic citations & Internet communications in ready to use templates
- ◆ Create synonyms for periodicals, keywords and authors
- ◆ Unlimited database capacity & number of databases

AND MUCH MORE...

**SPECIAL PRICE FOR SCIENCE SUBSCRIBERS**

Reference Manager and Capture

\$199.95 through October 31, 1997

(single-user version 30-Day Money-Back Guarantee)



Research Information Systems, 2355 Camino Vida Roble, Carlsbad, CA 92009 USA  
800.722.1227 • 760.438.5526 • Fax: 760.438.5266 • E-mail: sales@risinc.com • WWW: http://www.risinc.com

Division of Institute for Scientific Information  
A Thomson Company

Circle No. 38 on Readers' Service Card



adjustment of the manipulators, electrodes, or head stages. Olympus. For information call +49 40 23773-326 or circle 147 on the reader service card.

### Gel Documentation System

The Speedlight Platinum GDS for gel documentation includes on-chip integration for low-light level imaging, digital storage to disk for long-term archival and post processing, digital background subtraction, a sensor lock for sharp prints, and camera saturation



detection to keep images in the camera's linear dynamic range. The design philosophy is for centralized gel documentation and off-line, decentralized data processing, keeping the gel documentation system from becoming a data processing bottleneck. Lighttools Research. For information call 760-632-0677 or circle 148 on the reader service card.

### Literature

*Cell Culture Equipment* features a wide selection of products such as cell culture flasks, culture dishes, and inoculating loops and needles. Sigma Chemical. For information call 800-325-3010 or circle 149 on the reader service card.

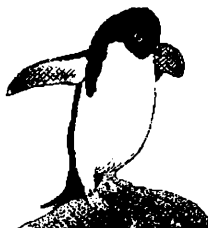
1997 Catalog: *Antibodies for Cell Biology* features products for studies in apoptosis, growth factors, signal transduction, cell proliferation, and other areas. New antibodies and kits for use in flow cytometry, immunoblotting, enzyme-linked immunosorbent assay, and immunoprecipitation are available. Immunotech. For information call 800-458-5060 or circle 150 on the reader service card.

# AAAS Travels

For members and friends of AAAS

## Discover ANTARCTICA!

January 24-  
February 6, 1998



Discover the awesome magnificence of Antarctica this winter. See dramatic rookeries of Magellanic and gentoo penguins, rockhoppers, and Adelies. Also look for the great whales of the world, as well as crabeater and elephant seals. Led by Dr. Gunter Weller, travel on board the 50-passenger Russian vessel, *M/V Akademik Golitsyn*, with comfortable, low-key accommodations, an informal atmosphere, and excellent meals. From \$3,995 (plus air).

## New Year's in BELIZE!

December 26, 1997-  
January 3, 1998

Join marine biologist Mark Silberstein on board 182-ft yacht *Rembrandt van Rijn* for an outstanding



introduction to the second largest barrier reef in the world, plus Cockscomb Jaguar Sanctuary, Crooked Tree Wildlife Reserve, Maya archaeological ruins, Manatees, Birds, and Snorkeling. \$2,795 (plus air). Four day Maya Extension to January 6 includes



Xunantunich, Tikal & more! (\$750 additional).

Call For Detailed  
Trip Brochures  
(800) 252-4910

# AAAS Travels

BETCHART EXPEDITIONS Inc.  
17050 Montebello Road  
Cupertino, California 95014-5435

## Still The World's First Miniature Fiber Optic Spectrometer



First in innovation.  
First in performance.  
First in affordability.

Low-cost Custom Systems  
for UV, VIS and  
Shortwave NIR Applications

- High sensitivity
- Remarkable flexibility
- Modular hardware and software
- Unmatched applications support

Our newest innovation is here!  
Ask about the high-sensitivity  
S2000 spectrometer  
for low light level applications!



Ocean Optics, Inc.

Tel: (813) 733-2447

Fax: (813) 733-3962

E-Mail: info@OceanOptics.com

www.OceanOptics.com

Ocean Optics Europe

Tel: 31-313-651-978

Fax: 31-313-655-783

E-Mail: 73131.150@compuserve.com

Circle No. 10 on Readers' Service Card



**DISPLAY CLASSIFIED ADVERTISEMENTS**

Call for rate and deadline information on display classified advertisements.

E-mail: science\_displayads@aaas.org

Jill Steinberg  
Recruitment Display Advertising  
Telephone: (202) 326-6543  
FAX: (202) 289-6742  
E-mail: science\_displayads@aaas.org

Gabrielle Boguslawski  
Recruitment Advertising 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

**LINE CLASSIFIED ADVERTISEMENTS**

**How to Submit a Line Classified Ad:**

Send your ad text to: e-mail: science\_classifieds@aaas.org; fax: (202) 289-6742. You must include your telephone number, billing address, and purchase order number in your e-mail or fax. Do not bold, italicize, or abbreviate any words. SCIENCE will edit and typeset ads according to SCIENCE style. **SCIENCE cannot provide proofs of typeset line ads.** Available categories: Positions Open, Meetings, Announcements, and Courses and Training. Line advertisements are not commissionable.

**Estimates:** SCIENCE will provide a cost estimate for line ads. **This is an approximate cost only.** Purchase orders must allow for variation between estimated lines and actual typeset lines and resulting final cost.

For line advertising deadlines, call Eric Banks, Telephone: (202) 326-6555; or Troy Benitez, Telephone: (202) 326-6740; FAX: (202) 289-6742. E-mail: 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, all classified advertisements, except for Positions Wanted ads, submitted for publication in SCIENCE are automatically posted on SCIENCE's online classified advertising service, SCIENCE Professional Network, at no additional charge.  
www.sciencemag.org

**Mail, FAX or E-mail materials to:**

SCIENCE Classified Advertising  
1200 New York Avenue, N.W., Room 911  
Washington, DC 20005  
FAX: 202-289-6742

E-mail: science\_classifieds@aaas.org (please include your telephone number in e-mail)

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

**Full-Page Recruitment Advertisement Directory**

Career Opportunities and Graduate Programs for

# BS & MS Scientists

The following organizations have placed full-page recruitment advertisements in the special advertising supplement in this issue of *Science* beginning on page 1322.

<u>Advertiser</u>	<u>Page</u>
<u>Organizations</u>	
Bayer .....	1339
Bristol-Myers Squibb .....	1327
Chiron .....	1337
Eli Lilly .....	1332
Genentech .....	1324-25
Genetics Institute .....	1329
Howard Hughes Medical Institute .....	1343
Megabios Corporation .....	1340
Millennium .....	1333
Novartis .....	1336
NPS Pharmaceuticals .....	1341
Pfizer .....	1331
Roche Bioscience .....	1328
Science Applications International Corporation ....	1354
SmithKline Beecham Pharmaceuticals .....	1335
Smithsonian Institution Astrophysical Observatory .....	1342

**Graduate School Programs**

Northwestern University .....	1353
Ohio State University .....	1347
University of Colorado-Health Science Center ....	1346
University of Colorado at Boulder .....	1345
University of Rochester .....	1349
University of Texas at Austin .....	1350
Washington University .....	1351

**SCIENCE**  
www.sciencemag.org





© 1997, Joyce Benna

Genentech employees form a human DNA chain.

Career Opportunities and Graduate Programs for

**H**onor the PhD: it truly is the academic pinnacle, public acknowledgment of excellence and potential. And that is as it should be. But the PhD confers no monopoly. Thousands of scientists with AA, BA, BS, MA, and MS degrees are demonstrating their own talents each day. They are the foundation on which most industrial science companies and all graduate science programs rest.

Here, we will speak of career opportunities for these scientists, not about what they don't have (the PhD) but rather what they have much of (skill and opportunity). Below, we hear from seven companies (Shaman Pharmaceuticals, Genentech, Hyland, Pfizer Inc, Hoffmann-La Roche Inc., SmithKline Beecham, and Zeneca Pharmaceuticals) and five graduate programs (the University of Rochester, the University of Colorado at Boulder, the University of California at Los Angeles [UCLA], Stanford, and the Biozentrum at the University of Basel in Switzerland). From all reports, BS and MS scientists are working at the very vanguard of contemporary science. They have a variety of ways to forge careers, and the science they do tells a tale of excellence expressed and potential realized.

# BS & MS Scientists

## Bringing Back the Wisdom: Shaman Pharmaceuticals

SOUTH SAN FRANCISCO, CALIFORNIA—Gina Morhun, vice president of human resources at Shaman Pharmaceuticals, says, "When you do things differently, you create new challenges for yourself." Shaman certainly does things differently, sending western-trained MDs and ethnobotanists to work with indigenous shamans in tropical regions, while biologists and chemists at home help turn shamanic wisdom (and medicinal plants) into pharmaceutical products.

Shaman currently is heavily recruiting BS and MS scientists in departments such as medicinal chemistry, plant discovery research, manufacturing, and QA/QC. "At every key level," Morhun says, "we have a number of research assistant and associate positions."

Natural products chemists, though rare, are indispensable at Shaman. "Once we have an extract from a natural product," Morhun

*John Timpane, PhD, writes frequently on the biotechnology and pharmaceutical industries.*

continued ►

# Genentech, Inc.

*incredible people*

**extraordinary science**

*Genentech's people share some pretty uncommon traits. Not surprising when you consider the scope of our mission - creating breakthrough medicines for conditions like cystic fibrosis, growth deficiency, cancer and heart disease. It demands a very special kind of person. Someone who will take risks, accept responsibility and constantly seek creative solutions.*

*Do you have the traits to contribute to making our vision of longer, healthier lives for thousands of people a reality? Consider what you expect from a career and yourself. Expect the extraordinary? Then share your traits with us.*

**www.gene.com**

## ***Associate Scientist/Scientist - Recovery Sciences***

You will design and develop commercial, large-scale recovery or purification processes using current protein purification technologies. This will involve participating in an interactive group collaborating with Scientists and Process Engineers. Your work may also encompass participation on project teams and in recovery process technology development and direct participation in plant implementation of process design. Requires a PhD or equivalent in Biochemistry, Bioanalytical Chemistry or Chemistry; at least 2 years of postdoctoral study is highly desirable. A conceptual understanding of chromatography and protein characterization and experience with protein purification at lab bench scale are essential. Good communication skills and the ability to conduct independent research are necessary. Job Code SCI784

## ***Research Assistant/Associate - Virus Testing and Development***

You will participate in the design and performance of studies on viral safety and validation of virus clearance by pharmaceutical protein recovery processes. You will also collaborate with several groups to work on the development of state-of-the-art nucleic acid-based methods to be used in the characterization of production cell lines and the optimization of cell culture and fermentation processes. Requires a BS or MS in Molecular Biology, Virology, Cell Biology, Biochemistry or a related field. You must also have strong skills in molecular biology (especially nucleic acid purification/characterization, quantitative PCR and nucleic acid sequencing) with 3-5+ years of applied experience. Job Code SCI547



## ***Research Associate/Associate Scientist - Analytical Chemistry***

You will act as a system manager of a 500 MHz spectrometer and pursue projects using NMR to study oligosaccharide structure/function/dynamics and protein-carbohydrate interactions. There will also be opportunities for interdisciplinary collaborations. Requires a BS or MS in Chemistry, Physics or a related field and direct experience in high resolution NMR spectroscopy. You must also have pulse sequence implementation, hardware maintenance and UNIX experience. Job Code SCI767

## ***Research Associate/Necropsy Specialist***

As part of the Pathology department, you will primarily support necropsy activities. Responsibilities will include performing necropsies on various species, assisting with blood collections, performing perfusion techniques, using anesthesia and euthanasia techniques according to company guidelines, utilizing gross photographic skills, trimming tissues and performing whole body cryotomy. A BS in a life science is preferred, but an AA with at least 2-5+ years' equivalent experience is acceptable. Job Code SCI722

## ***Research Associate - Protein Engineering***

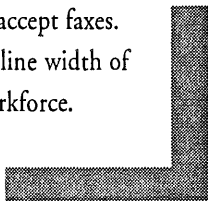
An energetic and flexible candidate is sought to participate in protein and peptide chemistry research projects in the department of Protein Engineering. You will work as part of a group of chemists focusing on problems in protein structure, function and recognition. Projects will require protein expression and purification, basic molecular biology, peptide synthesis and purification, and some biophysical and biochemical experimentation. Requires a BS in Chemistry or Biochemistry, previous research experience and skills in either organic synthesis or molecular biology, with a desire to learn the latter two disciplines. Strong organizational skills and a collaborative attitude are essential. Job Code SCI772

## ***Lab/Research Assistant***

Work in our Biopharmaceutics department determining pKa and solubility of new small drug candidates, develop formulation to support pharmacokinetic/toxicological studies, including stability studies, analytical method development (HPLC, MS, CZE, etc.). Requires a BS or MS in a pharmaceutical science, several years of experience in formulation of small drug candidates, strong analytical background and creativity in problem solving. Job Code SCI345

---

Our progressive benefits package includes full medical/dental/vision, 3 weeks vacation, a sabbatical program, a stock purchase plan and health club membership. Send your resume, indicating Job Code, to: **Genentech, Inc., Human Resources, P.O. Box 1950, South San Francisco, CA 94083-1950.** Please use plain typefaces. We cannot accept faxes. **You may e-mail your resume indicating Job Code to [jobs@gene.com](mailto:jobs@gene.com)** (ASCII files only with a maximum line width of 76 characters). Genentech is an Equal Opportunity Employer. We value the contributions of our diverse workforce.





*Biologists and chemists turn shamanic medicine into pharmaceuticals at Shaman.*

says, “we go straight to analysis and structure elucidation.” Organic chemistry skills and techniques, including chromatography and HPLC, are essential at this stage, where the search is on for the exact molecule that gives the plant its medicinal effects. Once the structure of the molecule is known, the project goes to medicinal chemists, who create analogues that may exhibit greater activity, less toxicity, and better receptor binding.

“We need people who are not only good scientists but also linguists, people with diplomatic skills, and people with some knowledge of FDA and foreign import and export regulations,” Morhun says. The ethnobotany group at Shaman is extremely diverse, with degrees in biology, ethnobotany, biodiversity, and ecology, along with knowledge of indigenous languages and customs—and excellent long-term camping skills.

The company itself is “a very hard-driving, goal-oriented place,” according to Morhun. Those who learn by doing, who like the candid exchange of opinion, who can grasp opportunity out of chaos in a multitask, time-crunched environment, do well here. Morhun says, “If I ask a candidate, ‘What are you looking for?’ and they answer, ‘Stability,’ I know this is not the place for them to be.” In this real-world science environment, chemists and biologists work and think together—and both work with the ethnobiologists, who think in a very different manner from either one. And few things are more real-world than field expeditions, where, for three months, MDs, translators, and scientists bed down with snakes, insects, and other discomforts—not to mention dealing with people who have never set eyes on their kind before.

Shaman values applicants from highly recognized programs, those who have shown initiative and participated in internships, co-ops, or undergraduate research, and those who have acquired skills useful in industry. All job candidates give a seminar, which both introduces their work to their future colleagues and demonstrates their ability to communicate. “We ask questions about teamwork skills and conflict resolution skills,” Morhun says. “We ask about mentors, and what role the mentor has played in this person’s career development. We really want to know what kind of person we’re hiring. We want them to be right for us, but more importantly, we want to be right for them.”

#### **“Making a Legend”: Espresso and Excellence at Genentech**

SOUTH SAN FRANCISCO, CALIFORNIA—Here, at the first biotech company in the world, you can hit the espresso coffeemakers in the lobby between experiments, or join the Ultimate Frisbee pick-up games on Wednesday night, or pump with the Bicycle Club, or attend the traditional company Ho-Ho’s—or you could just be one of 3,161 people doing great science together. Genentech has a knack of finding good scientists who can help you understand what they do and why they are excited about it. Al Guiteras, senior manager for employment, says, “We combine a high level of science with an unconventionally egalitarian and free-flowing atmosphere.”

Marnie Moody, college relations representative, says, “We’re trying to create a legend.” And Julie Oleynick, employment team leader for quality, regulatory, and medical affairs, locates BS and MS scientists in that effort: “They have great career opportunities because they have so many options, all of them science-based. Of course there’s discovery research, but there’s also clinical affairs, production, manufacturing, QA/QC, and regulatory affairs. Even in a department as seemingly far-removed as marketing, you see BS- and MS-level scientists using their science background daily.”

Asked about the profile of a good candidate, the trio came up with adjectives such as “entrepreneurial,” “creative,” and “self-directed.” Moody adds that community service is a

plus, both in a candidate’s background and later in the scientist’s career at Genentech: “People with a community consciousness find that the company thinks the same way.”

Areas of need include manufacturing science, particularly entry-level biochemists for technical positions such as media preparation and QC analyst. Hot skills include recombinant work and protein sciences. “Our manufacturing, QA/QC, and production groups look for an understanding of protein analysis, fermentation science, and chromatography,” Moody says. “In our research associate positions, molecular biology is a key area, with skills that include sequencing and library construction.” Guiteras notes a steady need for biostatisticians (“they are hard-to-find people, much in demand”), molecular modelers, computational biochemists, and MS degrees in nursing or pharmacology. He also speaks of the clinical research associate as a particularly attractive job for BS/MS scientists: “Clinical affairs is an exciting career where you can enjoy a mixture of science, patient care, and research.”

Oleynick urges job-seekers to get internships or other business experience that will serve as “both an eye-opener and a foot in the door.” Moody advises them to “know as much as you can about the industry—who the major companies are and what they’ve done. Sometimes I’m surprised by the lack of knowledge I encounter at job fairs. The information is out there and more accessible than ever.” As he guides us down an aisle, Guiteras adds, “We want people who have a romance about this business, who see it as a cause.”

#### **“Finding and Growing Talent”: Assuring Quality at Baxter Biotech’s Hyland Division**

HAYWARD, CALIFORNIA—“In a word, anywhere”: Teresa L. Patton, human resources manager for Baxter-Hyland Pharmaceuticals, is telling us where you are likely to find BS and MS scientists in her company. Hyland, a division of Baxter Healthcare, specializes in biotechnology, producing products from both human blood and recombinant technology. The Hayward facility is a provider of cGMP manufacturing services, specializing in pilot to small-scale cell culture and purifi-

continued ►



# STAR SCIENCE



**Bristol-Myers Squibb**

Pharmaceutical Research Institute

**W**e have built an internationally renowned team of scientists dedicated to excellence and innovation. Expansion of our research has created exceptional opportunities for M.S./B.S. scientists with at least 2 years of experience to join our highly collaborative, multidisciplinary team.

**Molecular Biologists/  
Biochemists/Cell Biologists**

- Oncology
- Neuroscience
- Metabolics
- Immunology
- Biologic Process

**Biologists & Chemists**

with strong Data Management skills

- Drug Discovery Informatics
- Metabolic Diseases
- Biologic Process

**Electrophysiologists**

- Neuroscience

**Behavioral  
Pharmacologists**

- Neuroscience

**Synthetic Organic Chemists/  
Combinatorial Chemists**

**Animal Physiologists**

- Metabolic Diseases
- Oncology

**Protein Chemists**

- Neuroscience
- Applied Genomics
- Immunology
- Biologic Process

Ph.D. level candidates are also encouraged to contact us for opportunities within:

- Oncology
- Informatics
- Magnetic Resonance Imaging & Spectroscopy
- Macromolecular Structure (Enzymology & Protein Chemistry)
- Applied Genomics (Mass Spectrometry/Protein Chemistry)
- Metabolic Diseases & Age-Related Disorders
- Biologic Process

All positions are located in our Princeton, New Jersey facility, except for those in Neuroscience (CT only) and Synthetic Organic & Combinatorial Chemists (both sites). Please forward your resume to the relevant location, including your area of scientific interest:

**Bristol-Myers Squibb**  
Pharmaceutical Research Institute  
Human Resources, P.O. Box 11279  
Trenton, NJ 08620-0279  
FAX: 609-581-8841

**Bristol-Myers Squibb**  
Pharmaceutical Research Institute  
P.O. Box 5101, 5 Research Parkway  
Wallingford, CT 06492-7661  
FAX: 203-284-7762

Equal Opportunity Employer, M/F/D/V

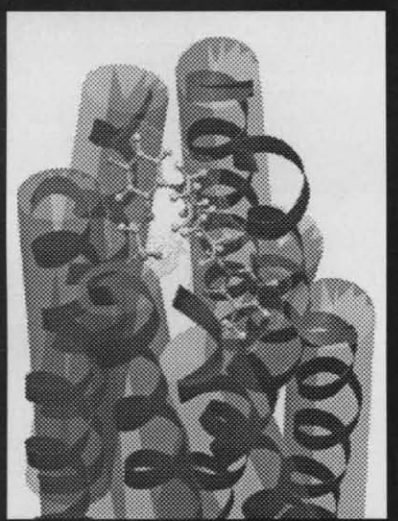


**Roche Bioscience** offers an exciting environment of innovation in human pharmaceutical research. Situated in one of the Bay Area's most vital technological regions, our Palo Alto campus presents a unique setting that combines the synergy of science and business to produce research that delivers results. Join our research-based enterprise as we discover important new medical therapies and create a future of industry firsts.



**Bioscience**

**As an equal opportunity employer, we are committed to workforce diversity. We proudly offer ongoing career opportunities for Research Associates and Research Scientists in most areas of modern biology and chemistry. Positions typically require a related BS/MS/PhD degree with 0-5+ years' experience and include:**



## **research associates and research scientists**

### ***Medicinal Chemistry***

Use your synthetic and analytical techniques to prepare, purify and characterize organic compounds for biological evaluation. This will include analyzing results, evaluating technology and proposing solutions. Your experience must include a good knowledge of literature resources.

### ***Chemical Development***

Using your expertise in chemistry and/or organic chemistry, you'll conduct research to solve complex organic chemical problems related to process research, process development and scale-up. This may include participating in the production of drug substances needed for proof of concept, as well as devising and implementing procedures for lab and pilot plant operations, following GMPs.

### ***Metabolism/PK/Bioanalysis***

Conduct *in vitro* and *in vivo* metabolism studies to support drug discovery programs, including new drug candidate selection, IND/CTX submissions, and related studies. Your chemistry/biochemistry/analytical chemistry background must include hands-on skills with a variety of experimental techniques and computer literacy.

**Roche Bioscience offers a highly attractive salary, bonus plans, a full benefits package, plus a unique environment that rewards new ideas and courageous decision-making. If you would like to explore our opportunities firsthand, apply today by sending your resume to: Roche Bioscience, Job Code: SCI0829KH, 3401 Hillview Avenue, Palo Alto, CA 94304. Fax 415/424-8159.**

**Visit us on the www at: <http://www.roche.com/bioscience> to learn more about these and other opportunities.**

**the future happens here first**



# IN IT FOR LIFE.

— Improving life by advancing science. —

Rapid growth. A strong research orientation. The drive ... and ability to set the direction for an industry. That's what you'll find at Genetics Institute.

As a result, Genetics Institute can help you find exactly what you've been looking for in your career:

- The opportunity to work on today's most advanced therapeutics - nine products in human clinical evaluation or commercialization for such areas as coagulation therapy, immunology, oncology, and tissue growth and repair
- The chance to discover the breakthrough products of tomorrow in protein-based therapeutics
- The unique sense of excitement, accomplishment, and satisfaction that comes from knowing that your efforts go directly towards improving health and life for generations to come

With its state-of-the-art technology and environment, Genetics Institute is also uniquely positioned to continue its success and growth well into the next millennium. You'll find it's a great organization for building and spending a career.



## ANDOVER, MA

### DRUG PRODUCT DEVELOPMENT

#### Development Staff - Parenterals Process Manufacturing Development

We currently have an exciting opening for an experienced, dedicated professional to participate in the development of our drug product manufacturing process for protein parenterals. Specific areas of involvement include process development, technology transfer, and validation. To qualify, you must have a BS in a scientific or engineering field, plus at least 3 years of experience in aseptic processing of parenterals. Process development or validation experience is desirable. **Job Code: SCI829-PL-387**

### BIOANALYTICAL SCIENCES

#### Scientific Staff

We seek a scientist with a strong work ethic, plus excellent communications, organizational, and interpersonal skills in dealing with all levels of scientists to serve as a research liaison between research immunology and the Antibody Technology Group on projects designed to generate monoclonals using traditional methods and phage display. Specific responsibilities include general antibody generation, purification, and characterization, plus the use of cell-based assays, flow cytometry, ELISA, and RIA. To qualify, you must have a Ph.D. plus 2 - 3 years of postdoctoral experience. Industrial experience and a knowledge of immunology, molecular biology, FACS, chromatography, Westerns, epitope mapping, FLITRX, MLRs, and functional assays are highly desirable. **Job Code: SCI829-MB-352**

#### Research Staff

We seek a scientist with the ability to interface with different researchers and manage multiple projects simultaneously to be involved with general antibody generation, purification, and characterization projects using traditional monoclonal antibody techniques as well as molecular approaches, such as phage display. You will also use cell-based assays for antibody purification, protein characterization, and assessment of antibody functionality. To qualify, you must have a BS/MS, plus 5 or more years of experience (or Ph.D. plus 1 - 2 years) in molecular biology and immunology. Molecular biology skills and familiarity with antibody generation a must, as is a knowledge of immunology, immune modulation, FACS, chromatography and general protein characterization, epitope mapping, and FLITRX. **Job Code: SCI829-MB-454**

## CAMBRIDGE, MA

### EMBRYONIC GROWTH AND REGULATORY PROTEINS GROUP

#### Scientist

We seek a highly motivated individual to join our team of scientists investigating the molecular basis of pancreas development and islet beta cell differentiation. To qualify, you must have a Ph.D. and 2 - 4 years of postdoctoral training in molecular biology, gene regulation or developmental biology. Familiarity with endoderm, gut or pancreas development, and hands-on experience in molecular biology, mRNA analysis, *in situ* hybridization, organ culture, and transgenic mice desirable. The successful candidate will contribute to ongoing efforts in large scale gene expression monitoring and functional analysis of candidate pancreas growth regulatory genes. **Job Code: SCI829-HM-PS**

#### Postdoctoral Fellowships

Two postdoctoral research positions are available to study pancreatic endocrine cell development and regeneration by applying molecular genetic and genomics technologies. Expertise in molecular biology and experimental embryology or developmental genetics required. **Job Code: SCI829-HM-PD**

To be considered for current or future job openings, please send resumes, suitable for scanning (see below), indicating Job Code, directly to: Human Resources Dept., Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140. Fax: (617) 876-8847.

Scannable resumes should be forwarded on plain white bond paper, using standard types and fonts, and no bold or italic print. When faxing resumes, please also mail an original copy.

Genetics Institute offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k), pension plan, relocation assistance, tuition assistance, and an on-site exercise facility.

Genetics Institute is an equal opportunity, affirmative action employer, dedicated to building strength through diversity.

For additional opportunities, visit our web site at:  
**www.genetics.com**

**GENETICS INSTITUTE®**



*Harnessing the Body's Power to Heal™*



*Science is a closely collaborative effort at Hyland.*

cation of bulk pharmaceuticals (primarily monoclonal antibodies) for therapeutic applications. Quality control, known as QC throughout the biopharmaceutical world, is vital here, and AA, BS, and MS scientists are very much involved.

Quality control is the process of ensuring that the product, the materials that go into making it, and the environment in which it is made all meet company and federal specifications. BS scientists work as both analysts and supervisors in QC. "We look for attention to detail," says Jacquie Byatt, QC immunology supervisor. "What I like to see in a person is the ability to anticipate potential problems. We have constant contact with manufacturing, quality assurance, and regulatory affairs. It's dynamic and quite interactive."

K. Y. Chan, supervisor of QC microbiology, has a BS in biology and an MS in microbiology; all the scientists in his group have BS degrees. "They are all well trained in their various specialties—immunology, chemistry, microbiology," he says, "and they bring their skills together at this job." Like Byatt, he looks for detail-orientation in job-seeking candidates, a talent for hands-on work, as well as problem-solving and troubleshooting. "Often," he says, "when a problem arises in the facility, we won't know the cause, and we'll have to investigate. It takes a team of logical problem-solvers working closely together."

As Patton puts it, "We do a good job of finding good talent and growing them into the profession." With Stanford, Berkeley, and UC Davis all providing BS- and PhD-level talent of the highest caliber, competition for good scientists is fierce. Hyland also hires AA-level scientists; several local colleges offer excellent

hands-on associate's degrees in biotechnology. Valued skills at Hyland include ELISA, HPLC, IEF, SDS-PAGE and Western blot, environmental monitoring technique, familiarity with cGMP and good documentation practices, and a general background in immunology, chemistry, or microbiology.

Baxter also looks for what Patton calls a "good cultural hire," a person who enjoys the hands-on atmosphere, someone who will grow into the job and the company. In perusing CVs, Patton looks for signs of leadership and resourcefulness in or out of school: "It could be extracurricular activities, sports—we like evidence of team skills—or community service. I like a diverse person, one who, if possible, has worked as well as going to school, not necessarily a person who spent all his or her time studying."

Chan, Patton, and Byatt encourage job-seekers to do their homework about the company prior to interviewing. They should also come prepared with questions about the work they will be doing. "Talk to as many people as you can," Patton says. "Use the Internet, look at the job postings." Chan, like most of the professional scientists we have spoken to, says he is "happy to talk to people in informational interviews," as is Patton: "It's part of the community outreach process for us, and part of the education process for the job-seekers. Everybody benefits."

#### **"From Idea to Candidate": Discovery Research at Pfizer Inc**

GROTON, CONNECTICUT—In the words of John LaMattina, vice president of US discovery operations for Pfizer Inc, "Discovery research takes the drug development process from idea to candidate, from the nascent stage in which we have a problem and a possible way of attacking it, to identifying a compound ready for clinical testing."

BS and MS scientists are what LaMattina calls "a key component in what we do," making up fully 60 percent of the discovery research staff. Duties of these scientists depend on their level of expertise upon entry. BS chemists fresh out of school will start to work making compounds; they and other entry-level scientists will work under a

good deal of direction. But like other companies, Pfizer has established a scientific career ladder for BS and MS scientists. As they grow in experience and ability, their roles evolve, taking on more independence and responsibility. "At the high end of that ladder," LaMattina says, "the BS and MS scientist can enjoy levels of responsibility and economic benefit analogous to those accorded to PhD-level scientists."

Pfizer also encourages these scientists to enhance their degrees, offering Wednesday afternoon courses on-site toward an MS at nearby Brown University or the University of Rhode Island. And, just by dint of working at Pfizer, their science becomes more and more interdisciplinary. "We ask people here to broaden themselves," LaMattina says, "not be just a biologist, just a chemist, but to understand more of the process of drug development. The chemist who understands biological principles is a more versatile chemist, and the same is true of the biologist who learns more about chemistry."

LaMattina is nothing if not optimistic about the potential for pharmaceutical research. "As the human genome unravels," he says, "and as we learn more about the molecular bases of disease, one can imagine that we'll be able to go after all of the scourges of humankind. Some will be more difficult to attack and some easier. But at Pfizer you'll find great activity in all the major areas—cancer, heart disease, diabetes, osteoporosis, CNS disorders, diseases of the aged, urogenital disease, postmenopausal problems. We don't have a hottest area. They're all hot."

Prospective job candidates should have enthusiasm, lab experience ("Between two people with the exact same qualifications, we'll always pick the one with good laboratory experience," LaMattina says), good communications skills, and teamwork skills—and they should "want to grow."

LaMattina's enthusiasm is catching as he makes his case:

"Science is a wonderful field to be in right now. When your career is over, you want to be able to close the lab book and say you worked on something that made a difference to people. And that's what we do. I can almost guar-

continued ►



While you may perceive academia as the only place where you can practice good science and continuously develop your skills, you may be surprised to find that there's a Fortune 100 company with an environment that fosters all that and more – **Pfizer**.

We take great pride in providing our scientists with a collegial environment that gives them the opportunity to work collaboratively in a multidisciplinary scientific community representing the world's finest corporate and academic resources. It's a fast-paced, yet close-knit culture with one of the most envied product pipelines in the world. Our commitment to researching and developing pharmaceuticals for major unmet medical needs is equaled only by our commitment to developing the career paths and advancing the skills of our scientific team.

We've implemented innovative programs, in cooperation with Brown University and the University of Rhode Island, that enable our scientific professionals to pursue their MS degrees right here at Pfizer during regular working hours.

We also provide 100% tuition reimbursement to those individuals choosing a degree program at other academic institutions.

So if you want to continuously push the boundaries of science while you continue to push your own development further and further ahead, join us at Pfizer for an education in growth and success.

Our continuing growth is creating the need for talented scientists in the therapeutic areas of Cancer, Immunology, Infectious Diseases, Cardiovascular Diseases, CNS, Inflammation, Diabetes, Artherosclerosis, Osteoporosis, Obesity, Allergy and Respiratory, so please send us your resume anytime.

## An Environment Of Continuous Learning.



### BS/MS Scientists

Qualifications include a BS or MS in a relevant field. Research experience, particularly undergraduate and independent research projects, is desired.

- Analytical Chemistry
- Biochemistry
- Bioinformatics
- Biological Sciences
- Cell Biology
- Chemical Engineering
- Clinical Measurements
- Drug Metabolism/  
Pharmacokinetics
- General Pharmacology
- Human Genetics
- Molecular Biology
- Neuroscience
- Pharmacology
- Physiology
- Protein Chemistry
- Psychotherapeutics
- Synthetic Organic Chemistry
- Tissue Culture
- Toxicology/Pathology

Located on the shores of historic Groton, CT, Pfizer can offer you a high quality of life in close proximity to New York City, Providence and Boston. We also offer very competitive salaries and excellent benefits, including medical/dental coverage and generous relocation assistance. For confidential consideration, please forward your resume, college transcripts and references to: Employee Resources, Job Code # 2240, Pfizer Inc., Central Research Division, Eastern Point Road, Groton, CT 06340. For more information on current career opportunities, please visit our Web site: <http://www.pfizer.com>. We are an equal opportunity employer dedicated to diversity M/F/D/V.



We're part of the cure.



*At Eli Lilly and Company, the desire to make a difference in people's lives is the catalyst which drives scientific breakthroughs. Each pharmaceutical we produce - from initial discovery through development... from distribution through ongoing evaluation - is the result of a dynamic collaboration of talented professionals. Our shared vision and goal is to create health care solutions which will allow people to live fuller, healthier lives.*

*In order to achieve the positive impact on human health which is the ultimate goal of Lilly's efforts, we seek people whose commitment to scientific advancement is matched by a desire to make a difference.*

*Our commitment to excellence extends to our emphasis on seeking chemists whose creativity, dedication, and integrity will strengthen our team efforts and help lead Lilly into the future.*

*Eli Lilly and Company currently has positions available for a wide array of chemists. We are seeking individuals for BS, MS, and Ph.D. assignments throughout the entire organization.*

*Opportunities to make a difference exist in the discovery, development and manufacturing components. All positions require outstanding oral and written communication skills and good problem solving abilities. These positions are located in Indianapolis, Lafayette, and Clinton, Indiana.*

## **When You Have A Dedication To SCIENTIFIC ADVANCEMENT And The *Desire* To Make A Difference**

### **Analytical Chemists**

Positions are available in our Quality Control groups. Positions are also available in the Analytical Development group for chemists experienced with methods development, validation, and transfer. Experience with proteins is also desirable.

### **Biochemists**

Positions are available in Discovery Research and Process Research and Development for biochemists experienced with the applications of biochemical techniques, especially those involving protein binding.

### **Biophysical Chemists**

Positions are available in Discovery Research and Product Development.

### **Formulation Chemists**

Positions are available in the Protein Development group for chemists with experience in pre-formulation, formulation, stability testing and product characterization.

### **Synthetic Organic Chemists**

Positions are available in Discovery Research, Process Research and Development, and Technical Services.

.....  
We offer a competitive compensation and benefits package and a highly professional environment. For confidential consideration, please send your resume and cover letter indicating position of interest to : **Eli Lilly and Company, Chemistry Recruiting, US Recruiting and Staffing, Lilly Corporate Center, Indianapolis, IN 46285**

We are an equal opportunity employer dedicated to diversity and the strength it brings to the workplace. For other opportunities at Eli Lilly and Company, please access our Job Bank at: <http://www.lilly.com>

**Lilly**  
Eli Lilly and Company

**KNOWLEDGE IS POWERFUL MEDICINE**



# WHERE "IMPOSSIBLE" UNLOCKS OPPORTUNITY

The goals we have set and the products we are developing are simply too important to be changed, stopped, or delayed by words like "improbable," "unrealistic," or even "impossible." If you see the impossible as a challenge to overcome ... rather than a reality to accept ... then we invite you to join us in one of these positions:

## RESEARCH ASSOCIATES

### Histology

Carry out all pathology projects in the Metabolic Disease and CNS program, including the localization of candidate genes/gene products and characterization of animal models of disease. To qualify, you must have a BS and 3+ years in a neuroscience or metabolic disease laboratory using histologic techniques. A strong understanding of rodent neuroanatomy and experience with *in situ* hybridization is a must.

Job Code: 0897-SHK

### Monoclonal Antibodies

Responsible for monoclonal antibody development and screening. Requires a BS and/or MS, plus experience with monoclonal antibody generation. Familiarity with automation a plus. Tissue culture, hybridoma generation, immunization of mice, flow cytometry, immunoassays, ELISA, radioligand binding assay experience desirable. Job Code: 0897-SMAK

### Phage Display

Aid in the development and practice of Phage Display technologies, including the cloning of immunoglobulin variable domains by PCR, construction of phage vectors and libraries expressing immunoglobulin receptors, selection of phage using affinity-based methods, and purification and characterization of the recombinant receptors. Requires a BS and 2 years of experience, specifically with the following techniques: mRNA isolation, cDNA production, PCR, plasmid cloning, phage handling, affinity purification, ELISA, flow cytometry and immunohistochemistry.

Job Code: 0897-SPDK

### Protein Purification

Contribute to the key efforts of a group expressing and purifying secreted recombinant proteins in a technologically advanced purification and analysis environment. Specifically, you will carry out rapid protein purification and analysis on multiple protein projects. Strong experience in protein purification techniques (LC, FPLC, HPLC, etc.) and standard analytical techniques, such as SDS PAGE and western blotting, is essential. Familiarity with Biocad instruments or mass spec. analyses a plus.

Job Code: 0897-SPPK

### Finisher - DNA Sequencing

Responsibilities include sequencing assembly, editing and polishing tasks on projects ranging from cDNA clones to large genomic clones. You will also meet regularly with gene discovery scientists to discuss clone assembly projects and take an active role in the design of new software and automation to support the assembly process. To qualify you must have a BS/MS in Molecular Biology, Biochemistry, Biology, Microbiology or Genetics. 3+ years of experience in DNA sequencing, sequence assembly, sequencing chemistry troubleshooting and familiarity with sequence analysis tools essential. ABI experience a plus. Job Code: 0897-SFH

### Research/Production Associate (2nd Shift)

2:30pm - 11:30pm Wed-Sun  
2:30pm - 11:30pm Sat-Wed

Join our high throughput second shift sequencing team in this entry-level position. You will utilize liquid handling robots for high throughput sequencing template preparation and sequencing reaction assembly. You will also be responsible for automated fluorescent sequencing, sequence data analysis, and production process optimization. Requires a BA/BS in Biochemistry, Biology, Microbiology, or Chemistry. Undergraduate research is a plus. Computer proficiency, Macintosh, PC, a plus. Job Code: 0897-SPH

## BIOINFORMATICS

### Product Manager, Technology Transfer

Work as a senior staff member in the TechTransfer group. Responsibilities include: planning, support, and transfer of Millennium's leading-edge bioinformatics software to our corporate pharmaceutical partners. Work closely with biologists, computer scientists, software engineers and program managers to ensure successful implementation and use of Millennium's proprietary technologies by our corporate partners. Requires 5+ years successful program management experience in software or technology-based environment and/or significant biology background; 20% travel required. MS in CS, Biology or related field required. Job Code: 0897-STTH

### User Support Specialist

Support users (both internal and pharmaceutical partners) of proprietary software; resolve technical problems with engineering, QA, and documentation. BS/MS and 5-10 years experience with UNIX, Mac, or Win95/NT and 20% travel required. Interest or experience in Biology required. Job Code 0897-SUSG

## SCIENTISTS

### Metabolic Disease Physiologist

Conduct *in vivo* studies exploring the effects of peripheral and central administration of compounds on food intake, metabolism and other parameters relevant to body weight regulation and diabetes. To qualify, you must have a Ph.D., MD., or DVM with a minimum of 3 years post-doctoral experience, preferably including *in vivo* and hypothalamic administration of compounds and work with *in vivo* metabolic disease models.

Job Code: 0897-SMDPK

### Therapeutic Proteins

Play a key role in a group expressing, purifying and characterizing novel recombinant secreted proteins. Specific responsibilities involve identifying the cellular targets of these proteins using diverse protein biochemistry and cell biology paradigms, and developing *in vitro* bioassays to determine cellular function. Requires a Ph.D. and research carried out in two or more laboratories focused on the study of secreted signaling molecules. A strong background in the study of growth factors/cytokines/hormones and their receptors *in vitro* is highly desirable. Important skills include isotopic/fluorescent labeling of proteins, receptor binding studies, Scatchard analysis, protein crosslinking, receptor autoradiography, histology, tissue culture and cell-based assays. Job Code: 0897-STPK

### Immunology

We seek a highly motivated professional to oversee a critical project within the department focused on monoclonal antibody production and characterization. You will be expected to pursue an active research program centered on gene discovery efforts. To qualify, you must have a Ph.D., plus a knowledge of immunology, molecular biology, and cell biology. 2-4 years or more of post-doctoral experience preferred. Experience in tissue culture, monoclonal antibody production, immunoassays, ELISA, radioimmunoassays, T cell functional assays, molecular biology and protein chemistry required. Job Code: 0897-SIK

Make it possible. Send or fax your resume, indicating Job Code, to:

Human Resources, Millennium Pharmaceuticals, Inc., 238 Main Street, Cambridge, MA 02142-4815, Fax: (617)225-0884.



MILLENNIUM PHARMACEUTICALS, INC.

We are an equal opportunity employer committed to discovering the individual in everyone.



antee anyone coming to Pfizer in 1998 that they'll experience working on a successful drug campaign at some point in their careers. If you like doing the work of science—and you should make sure you do—then I'd say strongly consider a career in drug discovery.”

**“More than Just a Summer Job”: Internships at Hoffmann-La Roche, Inc.**

NUTLEY, NEW JERSEY—“We see our internship program as more than just a summer job,” says Dianne Ruffolo, human resources associate at Hoffmann-La Roche, Inc. (Roche): “Our goal is to offer students an opportunity to learn about us and the pharmaceutical industry while handling meaningful projects

in a challenging environment.”

Out of hundreds of applicants, a total of 47 interns will be spending the summer at Roche in 1997, working in departments that range from marketing to engineering. Nineteen of those students are in discovery research, in departments that include immunology, oncology, and drug metabolism.

Shakel Lee, pursuing a BA in exercise science and psychology at Douglass College, Rutgers University, is spending her fourth straight summer as a Roche intern. Lee, who came in through the INROADS organization, is working in the department of inflammation and autoimmune diseases. “I like the experience of working in a large pharmaceu-



Interns at Roche: Jeffrey Tam and Shakel Lee.

tical company,” she says. “It gives you a good overview of the whole industry, and it gives you excellent opportunities for networking.”

Fellow intern Jeffrey Tam is pursuing a BA in biochemistry at Wesleyan University. “For me, the program’s main plus is that you get to put to work what you learn in school,” he says. “You can read about science in a textbook—for example, x-ray diffraction, which I’m doing this summer—but reading about it is one thing and doing it is another. Until you get into the lab, you can’t really see how it all works.”

Both are seeing a great deal of work in the labs. Lee is part of a cell adhesion molecule project, requiring protein purification and tissue culture work, including immunoaffinity columns, HPLC, gel electrophoresis, and immunoblotting techniques. Tam is working with protein crystallography, employing x-ray diffraction to analyze a protein’s three-dimensional structure.

As Ruffolo puts it, Roche considers its interns as “potential talents for the future.” (What are the big hiring needs at the moment? Ruffolo names three: bioinformatics, genomics, and organic synthetic chemistry.) To enhance their marketability as job-seekers, the company offers a series of workshops, including a popular one on presentation techniques. At summer’s end, each intern gives a presentation on his or her work to a group of Roche employees from various departments. Lee and Tam agree that the presentation is the culmination of their summer. “It’s a fantastic experience,” Tam says. “It’s a good way of summing up the summer for yourself.”

While Tam plans to pursue a PhD in biochemistry and eventually work in the biopharmaceuticals industry, Lee calls herself “unde-

**“No Longer Just a Pair of Hands”: BS and MS Synthetic Chemists at SmithKline Beecham**

KING OF PRUSSIA, PENNSYLVANIA—*Joe Flisak is assistant director of synthetic chemistry at SmithKline Pharmaceuticals. Below, he meditates on how recent changes in the pharmaceuticals industry have renovated the role of the BS and MS chemist:*

BS and MS scientists are not just a pair of hands. With the field becoming so much more competitive, we need a team that can bring a drug to market more quickly than ever. So we’re relying more and more on the BS and MS chemist to work, not under the PhD, but alongside the PhD, to be innovative in their chemistry, come up on their own with brand-new ideas and breakthroughs.

So when we look at a new BS or MS scientist, we’re looking for signs of creativity. We talk to their supervisors or lab mentors. Do they just follow orders? Did they have creative input into their research work? How involved were they in their project? Good science is an absolute requirement, but beyond that, we need the assertive, intelligent person who can take care of a project.

It used to be said that to have a “real” career in chemistry, you needed a PhD. These days, that’s no longer the case. We’ve had MS people that have been promoted to the PhD level and beyond, simply

on the basis of their excellent work. The opportunity is there. Also, BS and MS chemists often move to other departments and move up the ranks—as with a good friend of mine, an MS in chemistry who went for a law degree and became a patent attorney.

This is definitely the time of the synthetic chemist. With the growing emphasis on computational chemistry, companies are screening more compounds more quickly than ever before, and they’re facing the challenge of how to juggle so many new compounds coming at them at once. It’s a time of great excitement in the field as well—for example, with all the new work in asymmetric synthesis. Competition for these people is fierce—we regularly compete with other companies for the best chemists—and I have seen some astounding starting salaries.

Good candidates should have a solid science background, good lab skills, excellent organizational and communications skills (SmithKline is an international company, and we have to learn to communicate across cultures, disciplines, and time zones), and the ability to shift gears quickly. We value people who can accept a chemistry challenge gladly and come up with a solution that’s better than the original compound. That’s why we’re here.



Securing  
a healthy  
future,  
one gene  
at a time.

Analysis of the structure, function and regulation of genes in health and disease has yielded profound insight into the origin and progression of major diseases and is creating unprecedented opportunities to discover innovative drugs, vaccines and new diagnostic tests based on a rational understanding of molecular pathology.

SmithKline Beecham is at the forefront of genomics research in the healthcare industry. In seeking to forge new advances in genetic medicine,

we build on a strong heritage of innovation that has discovered some of the world's most important medicines. Through this innovation, SmithKline Beecham has become the world's number one vaccine company and a leader in diagnostic clinical laboratory services.

If you have a bachelor's or master's degree in molecular biology, microbiology, biochemistry, organic chemistry, statistics, bioinformatics or computer sciences, chemical engineering or environmental engineering and would like to work in an environment that encourages your contribution toward making lives healthier, please send your resume to: SmithKline Beecham, Central Recruitment, Job Code 003CDM97, 200 North 16th Street, Philadelphia, PA 19101. For priority review of

your resume, please apply online at [www.sb.com/careers](http://www.sb.com/careers) using our electronic resume form. Indicating Job Code is required for consideration. We are an Equal Opportunity Employer, M/F/D/V.



**SmithKline Beecham**

Challenging the natural limits.



**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 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, cancer, schizophrenia, 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 are also dedicated to providing a stimulating environment that is conducive to professional growth. We invite you to investigate the following opportunities in at our state-of-the-art Northern New Jersey locations:

**Scientist/Anti-Arthritis**

You will participate in the discovery of anti-arthritic therapies. This will involve *in vitro* examination of signal transduction pathways involved in inflammatory cytokine and growth factor signaling, as well as identification of targets for therapeutic intervention. You will also develop and run assays examining the activity of compounds on defined cellular targets. The successful candidate should have a BS or MS in biological sciences with 3 or more years of laboratory experience. Knowledge of signal transduction pathways and gene expression is also required. You must have strong skills in cell culture and in conducting biochemical assays, along with the demonstrated ability to work in an independent manner. Familiarity with radiotracer techniques, basic protein analysis (including gel electrophoresis, immunoprecipitation, Western blotting and metabolic labelling) is necessary. You must also have strong knowledge of recombinant DNA and RNA preparation, Northern blotting, PCR technology and methods involved in the expression of recombinant molecules within cells. Please refer to Position MG-4882 on resume AND envelope.

**Research Scientist/Arthritis**

You will focus on assessing the effectiveness of potential new therapies for the treatment of inflammation and arthritis in animal model systems. These studies will use a variety of clinical outcome measures, as well as biochemical assessment of treatment effects on target molecules. In addition, you will work with other scientists to measure pharmacological properties of research compounds that influence *in vivo* activity. Qualifications include a bachelor's degree in Biology (or equivalent) and 3+ years of relevant laboratory experience. A strong background in animal pharmacology and expertise in small animal handling procedures is essential; familiarity with standard biochemical methods and computer software for data analysis is desirable. Please refer to Position MG-4815 on resume AND envelope.

**Biochemist/Immunology/Arthritis**

The candidate selected for this position will be responsible for day-to-day operation of the lab. 3+ years of lab experience and technical expertise in at least two of the following areas is required: *in vitro* cell culture; immunoassay; protein analysis; western blotting; immunoprecipitation; protein purification and enzyme assays. A high level of independence and technical competence (to effectively carry out experimentation) is essential; knowledge of Excel, Word, Sigmaplot or similar PC experience is important. Excellent verbal and written communication skills are a must. Please refer to Position MG-4670 on resume AND envelope.

**Scientist/Histology/Arthritis**

The ideal candidate will have 2+ years of experience in a laboratory histology environment, with proven expertise in collection, preparation, sectioning and staining of joint connective tissue specimens. Immunohistochemistry background and use of a cryostat required; experience with small and large animal experimentation a must. Please refer to Position MG-4775 on resume AND envelope.

**Isotope Scientist**

The main responsibility is synthesizing drug substances labelled with radioactive isotopes ( $C^{14}$  or  $H^3$ ) or stable isotopes ( $C^{13}$  and/or  $H^2$ ). These labelled compounds are used in preclinical metabolic and biodistribution studies to support IND filings as well as in human ADME trials. This position offers some visibility within the department. To qualify, you must have a bachelor's degree in Chemistry with at least 3 years of experience in organic synthesis, or a masters degree in Organic Chemistry or a related field. Experience in organic synthesis, and familiarity with spectroscopic and chromatographic methods used in organic synthesis (IR, NMR, MS, HPLC, etc.) is also required. Excellent verbal and written communication skills are helpful. Experience handling radioisotopes is a plus. Please refer to Position MG-4734 on resume AND envelope.

Attractive salaries and comprehensive benefits. You will find them all and much more at Novartis. Write your own prescription for success and apply today. **PRINCIPALS ONLY:** send your resume/curriculum vitae and letter of interest, and the code for your position of interest on resume and envelope, to: R&D Staffing, Novartis Pharmaceuticals Corporation, 556 Morris Avenue, Building G2, Summit, NJ 07901. Please indicate position code on resume AND envelope. 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. *If you are interested in more than one position, please submit a separate resume for each position and indicate the appropriate position code on envelope and resume.*



# DISCOVER DIAGNOSTIC INGENUITY ON THE LEADING EDGE

See Us at the MIT/bioScience Career Fair  
September 5-6

*Chiron Diagnostics is a global leader in critical care systems and high-volume random-access immunodiagnostics. Our diagnostic ingenuity is evidenced in our innovative technologies, including Nucleic Acid Diagnostics for infectious diseases, which give us the competitive advantage in the race to link information with therapy for better healthcare. As we continue to answer some of the world's most important healthcare questions, we look to those with inquisitive minds—established scientific technical professionals and new graduates alike—who reflect our sense of urgency and spirit of ingenuity.*

## ■ QUALITY CONTROL SPECIALIST

Performing quality assays for the Nucleic Acid Diagnostics group, you will analyze data, report results and modify assays to meet department objectives. You will also design and perform experimental assays. Requires a BS degree in Biology or Chemistry with 3-6 years' related experience. **Job Code: QW024**

## ■ MANUFACTURING PRODUCT SPECIALIST

You will oversee the technical aspects related to reagent manufacturing. BS degree in Biology, Microbiology, or Chemistry supported by 3-6 years of experience is required. Skills in statistics and experimental design plus knowledge of immunoassay theory desired. **Job Code: PW099**

## ■ PRODUCT ENHANCEMENT TECHNICIAN

You will implement assay improvements to optimize our immunodiagnostic product line. This will include data collection duties and assisting in the validation of enhanced products from feasibility to the release-for-sale stage. Requires a BS degree in Chemistry, Biochemistry, Biology or Medical Technology with 3-6 years' experience performing wet chemistry laboratory work in a GMP/GLP environment. PC skills are a must. **Job Code: GW017**

## ■ PRODUCT SUPPORT TECHNICIAN

You will elevate, purify and validate critical raw materials for use in manufacturing immunodiagnostic reagents. We require a BS degree in Biology, Chemistry or Biochemistry with 1-3 years' experience, including chromatography and protein purification techniques. **Job Code: GW016**

## ■ OPERATIONS SUPPORT TECHNICIAN

You will perform laboratory in-process testing and troubleshooting on assays. You will need a BS degree in Biology, Biochemistry, or Chemistry with 0-1 year's experience and general laboratory skills. **Job Code: PW091**

## ■ POLYMER PROCESS ENGINEER

Requires a formal degree (advanced or multiple technical degrees a plus) in Polymer Science or Engineering, ideally from a recognized polymer institute or engineering school, and direct experience with PVC-based materials. Industrial experience within a manufacturing/process development setting plus an understanding of hydration behavior also required. **Job Code: GM116A**

*Ongoing opportunities also exist for Scientists in the areas of Molecular Biology and Virology, as well as for professionals in Chemical Engineering, Process Engineering, Mechanical Engineering, Electro-Mechanical Engineering, Sales, and Information Technology.*

Chiron Diagnostics offers a competitive salary and benefits package that reflect our corporate commitment to the quality of life as well as work. For confidential consideration, please send a scannable resume noting the Job Code corresponding with the position of your interest to: Human Resources Department, Chiron Diagnostics, 63 North Street, Medfield, MA 02052. Or email to: [jobs@chirondiag.com](mailto:jobs@chirondiag.com). Or visit us at: <http://www.chiron.com>

No telephone calls, please. Principals only.

Chiron Diagnostics is an Equal Opportunity/Affirmative Action Employer, M/F/D/V.

# CHIRON | DIAGNOSTICS

cided" but says a scientific career is "definitely" one of her options. They and Ruffolo recommend that BS and MS scientists thinking of a career in science find out about the industry in general and the company in particular. "Talk to a lot of different people about it," Lee says. "Talk to people actually working there." Ruffolo recommends that undergraduate scientists get lab experience. Perhaps the best advice comes from Lee: "If you're going to do an internship, find out what it has to offer besides a job."

### **"A True Eye-Opener": BS and MS Scientists at Zeneca Pharmaceuticals**

WILMINGTON, DELAWARE—"Scientists at Zeneca Pharmaceuticals are involved in lots of interesting endeavors that don't look anything like traditional science, jobs that nobody even knows about. There are so many parts to this company I don't even know yet. It's fascinating."

Bill Zinkand, research portfolio and operations analyst, is talking about the many nontraditional jobs for scientists at a contemporary bioscience company. Zinkand, who holds a BS in biochemistry from Virginia Tech, had been a career bench scientist when he was offered the chance to jump to something completely different.

Indeed, very few readers of SCIENCE will know what a research portfolio and operations analyst does. Nor will they know what Laura Cronk, group leader of information science and library, does—yet both of these scientists use their science background every day to perform essential roles at Zeneca Pharmaceuticals.

Both Zinkand and Cronk supply information, albeit in different ways and for different people. Zinkand keeps tabs on the wide range of concurrent research projects at Zeneca Pharmaceuticals and keeps senior management informed of these projects' progress, problems, and needs. "The challenge is not only to learn all the necessary material but also to communicate it in an accessible manner," Zinkand says.

Cronk's group speeds information to various businesses within the company: which competitors have an angiotensin II inhibitor,

who is the market leader in antihypertensives, who has what drug at what phase. She also abstracts and indexes all literature written about company products (an FDA requirement). "A very common request is from a researcher, to find information on a given compound," Cronk says: "how to make it, who holds the patent, what animal model or cell line to use in setting up a screen. We use the Internet, as well as a broad range of database vendors. It's a great place to see a really high-altitude view of the business."

So while neither Cronk nor Zinkand is at the bench, both are scientists doing science. As Cronk puts it, "We can all talk both business and science, so to speak, and translate between the two." Zinkand agrees: "Zeneca's portfolio of research projects, from target collection to nomination or development, represents a particular molecular target opportunity, a particular scientific topic. I have to know where each project is at the moment. I have to know what a second messenger system is over here, and why we're examining a *ras* gene over there."

Cronk received her BS in chemistry from the University of Wyoming and later completed an MS in information science at Drexel. She discovered a knack for "being able to read the science knowing how a scientist thinks, being able to cull out the relevant information and relate it to business needs." Both Zinkand and Cronk are communicators, and they emphasize that today's scientist had also better be. "Sometimes the initial call from someone needing information is, shall we say, somewhat too broad? For example, 'I want to know everything about asthma,'" Cronk says. "So you need good interviewing skills to pinpoint what they really need."

Scientists who want to do what Cronk and Zinkand do should have a good science background, good team, computer, and communications skills, and an interest in growing. "Companies look at the BS- or MS-level scientist as more useful because they can follow a more varied career path," Zinkand says. "So you have to realize that change is the norm now in science. There's frequent redirecting, retargeting, retooling. Be ready to move with it, and you'll do fine."

Cronk suggests that all scientists learn how to use libraries and databases to access chemical and pharmaceutical information. "Become familiar with the Internet," she says. "Learn how to use Excel and related programs. And get some experience in the industry—nothing substitutes for that."

For both Cronk and Zinkand, there are real and immediate rewards for doing the kind of science they do. One reward is the appreciation they get from their clients. "It's great to realize how much time and money you can save someone by finding the information they're looking for," Cronk says. And learning all about a dynamic bioscience company like Zeneca Pharmaceuticals is its own reward, as Bill Zinkand points out: "When they lead you from the lab into new jobs, your focus suddenly broadens, and you say, 'Wow—there's this huge company doing all these amazing things.' It's a true eye-opener. I come in every morning really wanting to help."

### **Promise, Intelligence, and "The Spark": The Access Program at UCLA**

LOS ANGELES, CALIFORNIA—David Meyers of UCLA sits with Will Silverman, a fourth-year graduate student in physiology, and Jennitte Stevens, a second-year graduate student in molecular biology, speaking about the program that has brought them together. Meyers heads the ACCESS program in molecular and cellular life sciences, a consortium of 11 departments and 165 faculty in both the college of arts and letters and the school of medicine. "The program is designed to appeal both to students who have already focused on an area for thesis work, and those who haven't made up their minds yet," Meyers says. "What sets us apart is that students are literally inundated with choices here."

In its lineaments, the program is the contemporary PhD program in life sciences: three rotations in the first year, with the student selecting a thesis lab at the end of that time. A rigorous common curriculum exposes students to molecular biology, cell biology, molecular genetics, immunology, pathology, and neuroscience. About 70 percent of applicants express interest in the broad category of microbiology, virology, and immunology. "A

continued ►





DEAN OF THE COLLEGE OF AGRICULTURAL AND LIFE SCIENCES  
and DIRECTOR OF THE EXPERIMENT STATIONS OF THE  
UNIVERSITY OF WISCONSIN—MADISON

The University of Wisconsin—Madison, one of the largest land-grant universities in the United States, invites nominations and applications for the position of Dean of the College of Agricultural and Life Sciences.

The College of Agricultural and Life Sciences offers graduate and undergraduate instruction in a wide range of specialties keyed to research, business, industry, communications, education, conservation and natural resources, production and technical assistance in national and international programs. The College enrolls approximately 1,000 graduate and 2,100 undergraduate students. Additional information about the College can be accessed at: <http://www.cals.wisc.edu>.

The dean provides leadership to a faculty and professional staff of approximately 1,200 and a budget of approximately \$115 million. The dean serves as director of the Wisconsin Agricultural Experiment Stations and is the chief academic and executive officer of the College with responsibility for personnel, budget, fund raising, community relations, curriculum, academic affairs, and physical facilities. The dean also is responsible for coordinating Cooperative Extension Service programs within the College, but shares administrative and budgetary control with UW-Extension. Many of the biological sciences are in this College; therefore, the search is for a dean with major contributions to shared leadership of the basic and applied biological sciences.

Major qualifications for this position include: a proven record of administrative skills and successful leadership in higher education; a thorough appreciation of the complex issues involving agriculture, environmental, basic and applied life sciences, and economic development; academic accomplishments as a scholar and teacher that meet the standards for a tenured appointment rank of full professor in the University of Wisconsin—Madison faculty; a commitment to maintain and improve quality undergraduate and graduate instruction, research, extension, and public service; and a demonstrated commitment to diversity. The successful candidate will be expected to interact with a wide range of groups including client organizations, alumni, legislators, foundations, and the business community.

The position is available January 1, 1998. Applications and nominations must be received by October 1, 1997 to ensure consideration. Later applications and nominations may also be considered. Applicants should include a current curriculum vitae and a cover letter that addresses how their strengths match the qualifications for the position and what they see as challenges and opportunities for the position. Submit nominations and applications to:

Professor Michael Pariza, Chair  
College of Agricultural and Life Sciences  
Dean Search and Screen Committee  
University of Wisconsin—Madison  
500 Lincoln Drive, 133 Bascom Hall  
Madison, WI 53706  
(608) 262-9337

*The University of Wisconsin—Madison is an Equal Opportunity, Affirmative Action Employer.*

GLOBAL CAREER OPPORTUNITIES

UNIVERSITY OF NAVARRA  
DIVISION OF GENE THERAPY AND HEPATOLOGY

THREE STAFF RESEARCH POSITIONS FOR THE LABORATORIES OF PATHOLOGY, VIRAL  
VECTORS FOR GENE THERAPY, AND PRODUCTION OF MONOCLONAL ANTIBODIES

The University of Navarra is currently promoting various research programs in Biomedicine, in particular in the fields of Gene Therapy, Hepatology, Oncology, Neurosciences, and Vascular Wall. In the newly created Division of Gene Therapy and Hepatology, three full-time research positions are to be filled in the following areas:

1. **Laboratory of Morphology and Image Analysis.** For this position a **pathologist** with experience in clinical diagnosis, histochemistry, basic research, and molecular biology techniques is required. Appropriate postdoctoral training would be taken into consideration. The position will suit pathologists wishing to collaborate with other groups of the Division in projects relating to gene therapy in primary and metastatic liver cancer (colorectal, pancreatic), gene therapy of viral hepatitis, pathogenesis, and molecular mechanisms of liver diseases. Experience in liver histopathology will therefore be of importance. The laboratory will also be responsible for animal toxicology studies of gene therapy vectors prior to initiation of clinical protocols.
2. **Laboratory of Viral Vectors for Gene Therapy.** For this position a **virologist** with interest and experience in the development of viral vectors for Gene Therapy is required. Applicants should have at least five years of postdoctoral training and should send a brief outline of a proposed research project relating to the development of viral vectors for Gene Therapy.
3. **Laboratory of Protein Chemistry and Production of Monoclonal Antibodies.** A scientist with expertise in the production and characterization of **monoclonal antibodies** is required. Experience in techniques of protein isolation and purification, production of recombinant proteins, development of ELISA systems would be of importance. Applicants should have at least three years postdoctoral training.

The salary will depend on the experience and qualifications of the candidate. Teaching involves postgraduate tutorials and training. Knowledge of written and spoken English is mandatory.

The University of Navarra will provide salaries for an additional scientist, one or two graduate students, one or two postdoctoral fellows, and one technician (three in Morphology and Image Analysis) in each of these three laboratories. Start-up funds for laboratory equipment will also be provided.

The positions are initially for a period of five years and a positive evaluation is required thereafter.

Applications should be sent to Prof. J. Prieto, Departamento de Medicina, Clinica Universitaria, Facultad de Medicina, Universidad de Navarra, Apartado 4209, Pamplona 31080, Spain.

Please forward a C.V., the name and address of three references. Give post-mail, phone, and e-mail number and address if available.

The closing date for receipt of applications is September 30th, 1997.



SCHOOL OF MEDICINE  
CHAIR

DEPARTMENT OF PATHOLOGY  
AND LABORATORY MEDICINE

The University of Pennsylvania School of Medicine seeks outstanding candidates for the position of Professor and Chair of the Department of Pathology and Laboratory Medicine. The successful applicant will be a national leader in the field and will provide academic leadership to establish a premier department of pathology and laboratory medicine. Applicants should have demonstrated qualifications in education, research, administration, and clinical services. The University is an equal opportunity, affirmative action employer; women, minorities, and international candidates are encouraged to apply. Letters of interest, CVs, and names of references should be sent to:



W. Gillies McKenna, M.D., Ph.D.  
Chair, Pathology and Laboratory  
Medicine Search Committee  
Department of Radiation Oncology  
University of Pennsylvania Health System  
2 Donner Building  
Philadelphia, PA 19104-4385

An equal opportunity/affirmative action employer

## LACTIC ACID FERMENTATION OPPORTUNITIES

*The National Renewable Energy Laboratory (NREL) in Golden is the nation's premier institution in the U.S. for research, development, and deployment of new technologies based on renewable resources. NREL is a government owned (U.S. Department of Energy), contractor operated research facility.*

The Center for Biotechnology for Fuels and Chemicals at NREL invites applications for two positions in the area of lactic acid fermentation process development. This project is directed at developing a low cost, integrated lactic acid fermentation and separation process which will permit penetration of the petroleum-derived plastics market by polylactic acid (PLA), a versatile and biodegradable plastic. These positions offer a challenging and worthwhile career opportunities with ample room for professional growth and development in a multi-disciplinary team environment.

### **Microbial Physiologist/Molecular Biologist- Position #E4200-131**

We seek a motivated and broadly trained Molecular Biologist/Microbial Physiologist with an advanced degree and 2 years' additional experience (or equivalent). Demonstrated achievement in the area of acid/base homeostasis and stress tolerance/adaptation, genetics and/or genetic engineering in lactic acid bacteria, especially *Lactobacillus* species, are required. Additional experience with comparative intermediary metabolism, continuous fermentations and coupled separations technologies are desirable skills.

### **Fermentation Process Engineer- Position #E4200-124**

We seek a motivated, broadly trained Fermentation Process/Biochemical Engineer with an advanced degree and 2 years' additional experience (or equivalent). Demonstrated achievement in the design, construction, operation and optimization of integrated, continuous bench-scale extractive organic acid fermentation processes, process modeling and economic analysis, and analytical chemical methods are essential. Experience with lactic acid bacteria, acid/base physiology, strain adaptation and selection techniques, and genetic engineering of *Lactobacillus* species are desirable skills.

The ability to produce results in a fast-paced, cooperative team environment, excellent written and interpersonal communication skills, and a willingness to assume a leadership position are essential for these positions. A doctoral degree is not required, but equivalent experience and a demonstrated track record of productivity in related areas, creativity, self-motivation and a positive team attitude are essential.

NREL offers a competitive compensation and benefits package and is an equal opportunity employer that is proud of its commitment to diversity. Women and minorities are encouraged to apply. For consideration, please send your resume and cover letter to: NREL, Human Resources Office (Please specify which requisition number-Req#E4200-124 or Req#E4200-131), 1617 Cole Boulevard, Golden, CO 80401-3393. Fax: (303)384-7599.



## BS/MS Chemists

Join a dynamic and growing effort at the forefront of drug discovery at The DuPont Merck Pharmaceutical Company. We are focused on meeting unmet medical needs through the discovery of innovative medicines. We currently have openings in our Chemical and Physical Sciences Department.

We are seeking BS/MS chemists to synthesize biologically active molecules to support our medicinal chemistry research programs. Individuals will apply state-of-the-art synthetic and purification techniques as well as NMR and mass spectral methods to the discovery of potential drugs. The ideal candidates will have completed lecture and laboratory courses in organic chemistry and will have performed undergraduate or graduate research projects. Previous industrial experience is desirable, but not required. Good written and oral communication skills are also desirable.

DuPont Merck offers an excellent benefits and compensation package. Our mid-Atlantic location affords an attractive lifestyle with easy access to a wide variety of academic, cultural and recreational activities.

Interested candidates should submit their resumes and references to: The DuPont Merck Pharmaceutical Company, P.O. Box 80400, E400/2413, Wilmington, DE 19880-0400, Attn: JR. An equal opportunity employer.

DU PONT  
MERCK

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



**Research Entomologist,  
Bioactive Agents Research Unit,  
National Center for Agricultural Utilization Research,  
Peoria, IL**

ARS is seeking a Research Entomologist to be part of an interdisciplinary team that examines relationships among insects, plants, and microorganisms and how these relationships are influenced by naturally occurring chemicals. Specifically, incumbent will examine effects of volatile and nonvolatile chemicals on insect behavior. Electrophysiological techniques such as electroantennographic GC detection (EAD) and single-cell electroantennography (EAG) will be key tools in the incumbent's research with volatiles. Techniques for sensory organs besides antennae or for nonvolatile compounds may need to be developed. A team goal is to increase understanding of how insects interact with their surroundings and then to apply this knowledge to develop safer and more effective pest management practices. A system of current interest involves the interaction between sap beetles (family Nitidulidae) and the fungi that produce mycotoxins in corn and other crops.

Candidate must have skill in EAD, knowledge of EAG, and experience with analytical chemistry techniques such as capillary GC and HPLC. Knowledge of supporting disciplines such as mass spectrometry, electronics, microscopy, insect physiology, insect behavior, laboratory and field bioassays, insect rearing, and statistics would be very helpful.

Ph.D. is desirable. *Must be U.S. citizen.* Salary is commensurate with experience (\$37,507–\$69,492 per annum). For information on the research program and/or position, contact **M. R. McGuire (309) 681-6595**. For information on application procedures/forms, contact **Marie Bishop (309) 681-6632** or access the ARS Home page at <http://www.ars.usda.gov>. Applications in response to the advertisement should be marked (ARS-D7N-0157) and postmarked by November 4, 1997.

*USDA/ARS IS AN EQUAL OPPORTUNITY EMPLOYER.*

**MICROBIOLOGIST  
MOLECULAR VIROLOGY SECTION  
RESPIRATORY AND ENTERIC VIRUSES BRANCH  
DIVISION OF VIRAL AND RICKETTSIAL DISEASES  
NATIONAL CENTER FOR INFECTIOUS DISEASES  
CENTERS FOR DISEASE CONTROL AND PREVENTION**

The Centers for Disease Control and Prevention is seeking qualified applicants for a staff position in the Molecular Virology Section, Respiratory and Enteric Viruses Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases. The person appointed will direct and participate in studies on polioviruses and other enteroviruses, including molecular studies of poliovirus transmission and their detailed genetic sequence characterization in order to understand poliovirus survival in human populations and to develop molecular diagnostic reagents. Microbiologists with molecular biology/virology and sequencing experience are being sought.

Qualifications preferred include a doctoral degree, significant scientific accomplishments in one or more areas of relevant research, and the ability to provide leadership for support staff.

Salary range is \$45,313–\$58,910 (GS12) to \$53,885–\$70,049 (GS13) per annum, depending on qualifications. Moving expenses will be provided.

Further information can be obtained from **Olen M. Kew (Ph.D.)**, Molecular Virology Section, Respiratory and Enteric Viruses Branch (G10), Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333. Telephone: 404-639-3940. FAX: 404-639-2648.

Interested candidates also may send their curriculum vitae in confidence along with the names of three professional references by 9/12/97, to **Janie Oddy**, 4770 Buford Highway, N.E., ATTN: Central Staffing Activity, Mailstop K-16, Atlanta GA 30341; E-mail=jlo00@cdc.gov.

*Must have U.S. citizenship. CDC is an Equal Opportunity Employer and provides a smoke-free work environment.*

**Graduate Program in Biochemistry  
and Molecular Biology**



**THE UNIVERSITY OF OKLAHOMA  
HEALTH SCIENCES CENTER**

The Department of Biochemistry & Molecular Biology at OU Health Sciences Center is expanding its graduate program. With the recent addition of several new and established investigators, the program faculty currently have over \$6,200,000 in annual grant support. We provide our graduate students with an up-to-date interdisciplinary training that will prepare them for careers in academic research, the biotechnology industry, health and bioscience management or teaching. The Department has excellent resources, graduate assistantships, state-of-the-art equipment, and access to a variety of Core Facilities. The campus is highly interactive with good links between basic science and clinical units, and provides a stimulating research atmosphere. The research areas in this program are:

**Cell Adhesion** (R. D. Bowditch, R. P. McEver)  
**Clinical Biochemistry** (M. Levine, D. M. Benbrook, R. A. Floyd, R. Hurst)  
**Glycobiology** (R. D. Cummings, P. L. DeAngelis)  
**Intracellular Trafficking** (G. Li, A. L. Olson, P. H. Weigel)  
**Signal Transduction** (H. Matsumoto, R. A. Steinberg, R. E. Anderson)  
**Protein Structure-Function** (G. M. Air, J. Tang, C.-S. Wang)  
**Transcriptional Regulation** (R. H. Broyles, B. B. Fuller, J. S. Hanas, J. R. Sokatch, J. W. Conaway)  
**Vascular Biochemistry** (G. L. Dale, C. T. Esmen, P. Neuenschwander)

For more information and applications, contact:  
**Biochemistry and Molecular Biology Admissions Committee,**  
O. U. Health Sciences Center, P.O. Box 26901,  
Oklahoma City, OK 73190  
(405) 271-2227 ext. 1201

or e-mail: [Biochemistry@ouhsc.edu](mailto:Biochemistry@ouhsc.edu)

Visit our website: <http://w3.ouhsc.edu/biochem>

**Roche**

BIOTECHNOLOGY OPERATIONS

**RESEARCH LEADER**

Roche Molecular Systems Inc., a subsidiary of Hoffmann-La Roche, Inc., is a worldwide leader in research, development, and manufacturing of molecular diagnostic reagents. We have an exceptional opportunity for a highly skilled professional to join our Manufacturing Operations team.

**RESEARCH LEADER**

As you oversee the purification and characterization of rDNA-derived enzymes for use in Roche products, you will participate in the day-to-day management of several purification labs, facilitate the transfer of new products and processes from research to manufacturing, and contribute to our operations in a fast-paced, team-oriented environment. Other duties include initiating new CQI programs, process scale-up, validation, and troubleshooting.

To qualify, you must have 5-10 years of biotechnology production experience. Expertise in all aspects of enzyme purification and characterization is essential, as is knowledge of cGMP, QSR, and ISO requirements. Familiarity with production planning, product cost accounting, expense/capital budget planning, and high-level computer skills is desirable. Position requires a Ph.D. or M.S. in Cell Biology, Microbiology, or the equivalent. Strong problem solving and oral/written communication skills are crucial.

We offer a competitive salary and a state-of-the-art environment that is conducive to professional success. For consideration, please forward your resume to: **Roche Molecular Systems Inc., Human Resources Dept. SMP1/SM, Branchburg Township, 1080 U.S. Highway 202, Somerville, NJ 08876-3771.** We are an equal opportunity employer m/f/d/v.

**Roche**

**Roche Molecular Systems Inc.**

A Member of the Roche Group

## NemaPharm

A Sequana Company



Add your efforts to highly dedicated researchers working to unlock disease pathways, identify new therapeutic targets and discover drug candidates.

Located in Cambridge, Massachusetts, NemaPharm is a leader in the use of model organisms for human drug discovery, especially the nematode *Caenorhabditis elegans*. As part of a major expansion in Functional Genomics, we have openings in the following areas:

### C. elegans Biologists

Join the largest group of nematode biologists using *C. elegans* for disease pathway and drug discovery in

the world. Candidates with Ph.D.

and substantial experience in *C. elegans* genetics and biology use **Code: NP-MB1**.

Candidates with BS or MS degree and experience with *C. elegans* are also encouraged to apply and should use **Code: NP-MB2**.

### Molecular Biologist

Lead a team using state-of-the-art genomic technologies to develop and apply

rapid methods for identifying gene knockouts and analyzing gene function. Ph.D. or MS and expertise with PCR, construction and screening of cDNA libraries and related molecular biology techniques essential. Research experience with model organisms or industry experience with high-throughput PCR-based technologies desirable. **Code: NP-LL1**

### Bioinformatics Specialist

Be part of a dynamic inter-company team providing timely Bioinformatics analysis in support of new and

on-going functional genomics projects. BS, MS or Ph.D. in Biological Sciences and relevant computer skills are required, including experience with homology search and sequence alignment algorithms, analysis of gene structure and functional domains and molecular phylogenetics. **Code: NP-LL2**

NemaPharm is a subsidiary of Sequana Therapeutics, a leading genomics company. NemaPharm positions are in a challenging and interactive research environment. We offer an excellent salary and benefits package and relocation assistance. Please mail or fax a letter of interest indicating Code, your CV and the names of 3 references to: **Ms. Runica Smith, NemaPharm, Inc., Suite 470, 26 Landsdowne Street, Cambridge, MA 02139**. To learn more about NemaPharm, visit our web page at: <http://www.nemapharm.com>. We are an Equal Opportunity Employer.

## The Power Of Technology Gives Us The Power To Discover.

*A lot of biotech jobs put you just off an interstate, a beltway, or freeway, but we'll surround you with rolling tree-*

*covered hills, the ocean to the east, and the mountains to the west. Research Triangle Park thrives with technology, and offers all the benefits of living in beautiful North Carolina.*

Sphinx Pharmaceuticals continues to reinvent the lead generation process by bringing chemistry, screen development, automation, high throughput screening, and information technology into a fully integrated drug discovery engine. This inclusive team approach will allow you to utilize your current scientific expertise while working closely with other scientists to develop cutting-edge drug discovery tools. We invite you to apply your skills to change the world of drug discovery, while expanding your own horizons in our brand new, state-of-the-art, 150,000 square foot facility. Currently we are looking for high energy team players with the following backgrounds:



## Chemists, Lead Generation

Expansion of our laboratories has created growth-oriented opportunities at the BS/MS and Ph.D. levels in the following areas of expertise:

- Synthetic Chemistry
- Medicinal Chemistry
- Combinatorial Chemistry
- NMR Spectroscopy
- Diversity Analysis
- Laboratory Automation

These positions will focus on the development of new methods, chemistries, equipment, and automation for parallel array synthesis. The successful candidates will show strong desire to develop new technologies to accelerate lead generation.

With competitive compensation, benefits and a supportive professional environment, you'll have the power to achieve your career goals. For consideration, please send your resume to: **Sphinx Pharmaceuticals, Attn: Human Resources, 4615 University Drive, Durham, NC 27707**. We are an Equal Opportunity Employer.

**SPHINX**  
PHARMACEUTICALS

A Division of

*Lilly*

Eli Lilly and Company

KNOWLEDGE IS POWERFUL MEDICINE





Howard Hughes Medical Institute

# Fellowships for Biological and Biomedical Sciences

The Howard Hughes Medical Institute announces the 1998 competitions for fellowship programs that support training in fundamental biological and biomedical research. Awards, based on international competitions, focus on research directed to understanding basic biological processes or disease mechanisms. Fellowships may be held at academic or nonprofit research institutions.

---

## Predoctoral Fellowships in Biological Sciences

Up to five years of support for full-time graduate study toward a Ph.D. degree in biostatistics, cell biology, epidemiology, genetics, immunology, neuroscience, or structural biology. Applicants must not have completed the first year of postbaccalaureate graduate study in biology. *Application deadline: mid-November.*

---

## Postdoctoral Research Fellowships for Physicians

Three years of support for training in fundamental research subsequent to at least two years of postgraduate clinical training and no more than two years of postdoctoral research training. *Application deadline: early December.*

---

## Research Training Fellowships for Medical Students

An opportunity for medical students in the United States to explore a burgeoning interest in fundamental research. Support is awarded for one year of full-time fundamental research in a laboratory at the student's medical school or another institution (except NIH in Bethesda, Maryland). *Application deadline: early December.*

---

## Research Scholars at the National Institutes of Health

Under this joint HHMI-NIH program, medical students in the United States spend an intensive year in research in the intramural program at NIH in Bethesda, Maryland. Residence is provided at the Cloister on the NIH campus. *Application deadline: early January.*

---

## 1998 Program Announcements and Applications

### *For Predoctoral Fellowships:*

Hughes Fellowship Program  
The Fellowship Office  
National Research Council  
2101 Constitution Avenue  
Washington, DC 20418  
United States of America  
Telephone (202) 334-2872  
Fax (202) 334-3419  
E-mail <infofell@nas.edu>  
<http://fellowships.nas.edu>

### *For Other Programs:*

Howard Hughes Medical Institute  
Office of Grants and Special Programs  
Department AL98  
4000 Jones Bridge Road  
Chevy Chase MD 20815-6789  
United States of America  
Telephone (301) 215-8889  
Fax (301) 215-8888  
E-mail <fellows@hq.hhmi.org>  
<http://www.hhmi.org/fellowships/>

The Howard Hughes Medical Institute, an Equal Opportunity Employer, welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

few years ago," Meyers notes, "students would want an immediate tie-in to medical applications, but now it's becoming obvious that basic science discoveries at the molecular level are setting the stage for breakthroughs in medical science—thus this pattern."

Meyers speaks of the ideal candidate as bright, stimulating, and creative. While research experience is clearly a valuable commodity ("and can make up for a less than stellar academic record," as Meyers puts it), ACCESS also values those who have demonstrated other kinds of giftedness. "We rely a great deal on the personal interview to tell us what kind of person we have before us," Meyers says, "and sometimes it will show us a creative person who simply hasn't had the opportunity for research experience."

At the University of Arizona, where she received her BS in molecular and cellular biology, Stevens did a great deal of research: "I worked in a lab for three years. I had a terrific advisor, who let me go pretty much where I wanted to go. I found that everything interested me; I felt like a wide-eyed kid." In the course of undergraduate work at UC San Diego in physiology and neurology, Silverman caught "the research bug"—"I loved not only doing the research itself, but also the teamwork, the mentoring. I was hooked." When first applying to UCLA, he had no idea of the program's breadth—"but after interviewing at a few other schools, I saw the advantages here."

In the lab, Silverman is working with recombinant DNA techniques, cloning, in vitro transcription, biochemistry, protein isolation, and electrophysiology. Stevens also does recombinant work, along with protein purification, cell culture, library screening, and cell cloning. In the halls, they hear much excited talk about genetics, cell control, and the biology of expression, particularly about new insights into functional genomics.

As for their plans, both are attracted to the academic life of doing and teaching science—but both are realistic about the rigors of grant-writing and the potential of an industrial career. Silverman wants candidates to realize that they "can't just go in half-way—so get involved in a research lab and see if you like it."

(Both he and Stevens nod their heads when he says this; both obviously like their work.) Both underline the "enormous time commitment" of a PhD in science, the late nights and weekends in the lab, the single-mindedness and endurance needed to see the work through.

Relationships struck up in students' graduate years may be the most lasting legacy of a program like ACCESS. Silverman says, "Several buddies and I trade problems in experimental protocols, and often people will have suggestions that are very helpful." Stevens adds, "And not just in your own area. I've had intense discussions with members of the departments of anesthesiology, molecular biology, molecular genetics, and biochemistry. I know these people through my course work, and they are able and willing to cross boundaries."

That "tremendous interdigitation" of research interests, the gradual elision of departmental and disciplinary boundaries, is what is truly exciting at UCLA: "That," says Meyers, "is why I believe in a program like this one."

### Smooth Running and Straight Answers: Graduate Biology at Colorado

**BOULDER, COLORADO**—At the University of Colorado at Boulder, the science is as good as the scenery. Heidi Chial, fifth-year graduate student in molecular, cellular, and developmental biology, combines science with the outdoor life: "When we go running, we usually spend the first part of the run discussing new results from our labs. That's the way it is here."

Mark Winey, graduate director, says, "Our program emphasizes research and basic science aspects of molecular, cell, and developmental biology, using a great deal of genetics. It's a relatively small program, and very interactive. All the students know one another, the faculty is very accessible to the students, and we're largely in the same building." Total graduate enrollment is currently around 60, with entering classes averaging 8 to 12. "We'll make offers," Winey says, "to about 40 to 50 out of 150 to 200 total applicants."

Winey gives this recipe for successful applicants: Strong students with research experience and a strong letter from their research advisor. "We try to get a sense from the letter of what the person is like," Winey

says. "Science is a very social business of working closely with other people in a lab setting or teaching together in courses. We like people with reasonable social skills, people who display potential to work as independent investigators."

Chial, who is studying a gene (*NDC1*) in budding yeast that is involved in spindle-pole body duplication, came to Colorado from Gustavus Adolphus College, where a mentor in the chemistry and biochemistry department brought out her taste for research. Good work and publication ensued. A molecular genetics class confirmed that her true calling was molecular biology.

Why did she apply to Colorado? "I looked at some huge programs where you'd be only a number, but I needed more interaction than that," she says. "That's what you get here. In the classroom, we often read scientific papers, and I like the discussions and the small (six-person) class size. It's highly interactive, and you get lots of experience in giving presentations. At the same time, the research here is great. The professors are excited about what they're doing, and they make themselves available to you."

Chial estimates that she spends an average of 10 hours a day in the lab. Her work spans genetics, molecular biology, cloning, cell biology, biochemistry, and electron microscopy: "I get to use a number of different techniques to explore questions related to my research." As for the future, she is interested in teaching and doing research at a small liberal arts college: "Sort of going back to my roots. You learn about life in places like that."

Winey's reputation as an excellent advisor is borne out when he speaks of what applicants tend not to know. "They often don't realize how early they need to apply and take the GRE's," he says. "And strong applicants need to be pre-



*Fifth-year graduate student Heidi Chial and graduate director Mark Winey.*



# SCIENCE CAREER FAIR

CAMBRIDGE, MA, 5-6 SEPTEMBER  
MIT CAMPUS, STRATTON STUDENT CENTER  
84 MASSACHUSETTS AVE.

## PROGRAM GUIDE

5 September: 11am-4pm

6 September: 11am-3pm

The following organizations are interviewing at the September 5-6 SCIENCE Career Fair. See their recruitment ads in this issue for details on scientific career opportunities.

	Page Number
ALKERMES .....	1356
BAYER .....	1339
BRISTOL-MYERS SQUIBB .....	1327
CHIRON DIAGNOSTICS .....	1337
ELI LILLY .....	1332
GENETICS INSTITUTE .....	1329
MILLENNIUM .....	1333
NEMAPHARM .....	1357
PFIZER .....	1331
SMITHSONIAN INSTITUTION ASTROPHYSICAL OBSERVATORY .....	1342
W. L. GORE AND ASSOCIATES, INC. ...	1355

Participating organizations as of 8/20/97

### Future SCIENCE Career Fairs:

Palo Alto, CA on the Stanford University  
Campus, 3-4 October 1997

### To pre-register for Palo Alto:

Please submit your resumé or CV  
no later than 5 September via  
fax: (202) 289-6742, or  
e-mail: careerfairs@aaas.org

### For more information:

Please call (202) 326-7018, or access  
SCIENCE Career Fair Information Online:  
[www.sciencemag.org](http://www.sciencemag.org)

(Choose SCIENCE Professional Network  
from the menu)

SPONSORED BY  
**SCIENCE**

## SCIENCE CAREER FAIR

# Problems Solved.

The challenge of creating new solutions drives the people of W.L. Gore & Associates. From synthetic blood vessels to vascular grafts to Gore-TEX<sup>®</sup> fabric, we've created hundreds of standout products that provide new answers and unique value. Our non-hierarchical culture of self-commitment and direct, person-to-person communication removes barriers to creativity found in more traditional organizations. It's among the reasons we've been named one of "The 100 Best Companies to Work for in America."

## PRODUCT SPECIALISTS/SCIENTISTS

Our Medical Products Division in Flagstaff, Arizona has opportunities for Product Specialists/Scientists with a Ph.D. in Chemical Engineering, Biomedical Engineering, Bioengineering, Mechanical Engineering, Biology, or Materials Science/Polymer Technology. A research focus in Biosensor, Vascular/Cardiovascular, or Minimally Invasive/Interventional Technology; Polymers for Biomedical Applications, Fluid Dynamics, or Drug Delivery Research/Pharmacology is desired. Requirements also include proven success in research, product development, or product management, and extensive knowledge in Physiology, Anatomy or Medical Statistics. A background including Medical Treatment, Medical Device Marketing and Application, Design or Development is preferred.

We offer competitive compensation and comprehensive benefits. For immediate consideration, send your resume to:



Creative Technologies  
Worldwide

\* Gore-TEX is a registered trademark of  
W.L. Gore & Associates, Inc.

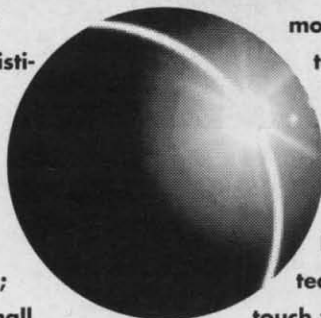
W.L. Gore & Associates  
Attn: Ref. #SCI997  
P.O. Box 2400  
Flagstaff, AZ 86003-2400  
Fax: (520) 527-2280

We are an Equal Opportunity  
Employer.

Meet us at the  
bioScience Career Fair at MIT  
on September 5-6, 1997.

## DELIVERING THE SCIENCE THAT DELIVERS THE DRUGS.

At Alkermes, we are applying the tools of biotechnology to the development of sophisticated proprietary drug delivery systems. We are developing product candidates based on three independent technologies: RMP-7™, for drug delivery across the blood-brain barrier; ProLease® for sustained release of proteins and peptides; and Medisorb® for sustained release of small



molecule pharmaceuticals. With these leading technologies, several important clinical trials in progress, and an impressive list of collaborations with major pharmaceutical partners, Alkermes has the foundation for success in place. If you are ready to join our challenging, team-oriented environment, get in touch with Alkermes.

We have the following career opportunities for B.S. or M.S. Scientists with experience in the following areas:

- Analytical Chemistry
- Biochemistry
- Formulations
- Pharmacology
- Protein Chemistry
- Bioanalytical

We also have career opportunities for Scientists with a Ph.D. in the following areas:

- Formulations
- Pharmacology
- Toxicology

With clinical trials underway and the commercialization of our proprietary technologies in sight, we provide an exciting collaborative atmosphere and superior professional rewards. For immediate consideration, please send your CV to: **Human Resources, Alkermes, Inc., 64 Sidney Street, Cambridge, MA 02139-4136; Fax: (617) 494-9263 or visit us at the Career Fair at MIT.** We are an equal opportunity employer, relying on the strength of a diverse workforce.

# Alkermes



## Want to get your foot in the door?

Then let SCIENCE open some doors for you by attending the **SCIENCE Career Fairs**. SCIENCE Career Fairs offer the perfect opportunity for scientific professionals to meet in person with representatives from top biotechnology and pharmaceutical companies, universities, governmental agencies, and institutions.

### UPCOMING 1997 SCIENCE CAREER FAIRS

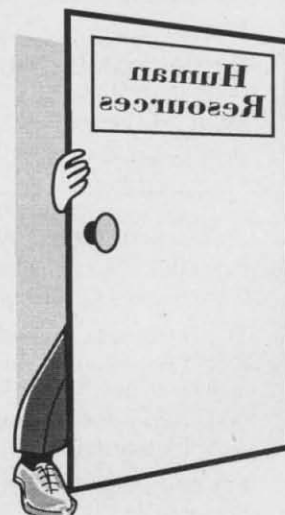
**Cambridge, MA** on the MIT Campus  
84 Massachusetts Ave., Stratton Building  
Student Center, 2nd Floor, La Salla Room  
5 Sept.: 11 am – 4 pm  
6 Sept.: 11 am – 3 pm

**Palo Alto, CA**  
on the Stanford Campus  
Tresidder Memorial Union  
3 Oct.: 11 am – 4 pm  
4 Oct.: 11 am – 3 pm

### To pre-register for Palo Alto:

Please submit your résumé or CV via FAX: (202) 289-6742, or via e-mail: [careerfaairs@aaas.org](mailto:careerfaairs@aaas.org) by 5 September. **Remember to bring multiple copies of your CV or résumé with you to the Career Fair; a copy will be necessary to gain admission to the hall.** Admission to all of the events is FREE.

Do not contact MIT or Stanford directly. They are not responsible for organizing these events.



# SCIENCE

## CAREER FAIRS

For more information call (202) 326-7018  
SCIENCE Career Fair Information Online:  
[www.sciencemag.org](http://www.sciencemag.org) (Choose SCIENCE Professional Network from the menu)



Graduate  
Programs  
in

# Science & Engineering

at The Ohio State University

## College of Biological Sciences

<http://www.biosci.ohio-state.edu>

Entomology  
Microbiology  
Molecular Genetics  
Plant Biology  
Zoology

## College of Engineering

<http://www.eng.ohio-state.edu>

Aeronautical & Astronautical  
Engineering  
Agricultural Engineering  
Architecture  
Chemical Engineering  
City & Regional Planning  
Civil Engineering  
Computer & Information Science  
Electrical Engineering  
Engineering Mechanics  
Geodetic Science & Surveying  
Industrial & Systems Engineering  
Landscape Architecture  
Materials Science & Engineering  
Mechanical Engineering  
Nuclear Engineering  
Welding Engineering

## College of Mathematical and Physical Sciences

<http://www.mps.ohio-state.edu>

Astronomy  
Biostatistics  
Chemistry  
Geological Sciences  
Mathematics  
Physics  
Statistics

## College of Medicine and Public Health

[http://www.med.ohio-state.edu/  
ColMed.html](http://www.med.ohio-state.edu/ColMed.html)

Allied Medical Professions  
Anatomy  
Health Services Management & Policy  
Medical Microbiology & Immunology  
Medical Science  
Pathology  
Pharmacology  
Physiology  
Preventive Medicine

## Interdisciplinary Programs

[http://www.gradsch.ohio-  
state/GSInterD.html](http://www.gradsch.ohio-state/GSInterD.html)

Biomedical Engineering  
Biophysics  
Chemical Physics  
Environmental Science  
Molecular, Cellular, &  
Developmental Biology  
Neuroscience  
Ohio State Biochemistry Program



For further information,  
contact:

The Ohio State University  
Graduate School  
247 University Hall  
230 North Oval Mall  
Columbus, OH 43210-1366  
(614) 292-6031

[www.gradsch.ohio-state.edu](http://www.gradsch.ohio-state.edu)

pared to be traveling a fair amount from late February to early April, as they visit schools for interviews. Get a credit card with a line of credit that can cover the cost of airline tickets until the host institutions can reimburse you."

When asked what majors are most hireable at the moment, Winey responds, "The demand for computational biologists is unbelievable. The salaries they earn and the competition to recruit them is unprecedented." As for hot fields of the near future, he points to the coming of functional genomics, as scientists go from the mapping of the genome to identifying the function of individual genes and groups of genes.

Winey advises new graduate students to take their rotations very seriously and carefully investigate prospective thesis labs. "Ask these questions: Are the students finishing in a timely manner? Is their work being published in a timely manner? (If not, your career development may be limited if you work in these labs.) Are students going on to postdocs and jobs?" Chial suggests that you talk to, well, people like her: "When you're looking at schools, really talk to the graduate students there. They'll give you the straight answers."

#### **"A Compulsion for Science": Graduate Programs at the University of Rochester**

ROCHESTER, NEW YORK—In the University of Rochester School of Medicine and Dentistry, Barbara Iglewski is professor and chair of the department of microbiology and immunology and M.W. Anders is Lewis Pratt Ross professor and chair of the department of pharmacology and physiology. Both programs reflect the dynamic, increasingly interdisciplinary world of science. Iglewski's program, which accepts from nine to 14 students each year, emphasizes molecular microbial pathogenesis and immunobiology. Anders's accepts about five students each year and focuses on signal transduction, ion channel structure and function, cell damage and death, neuropharmacology, and cardiovascular pharmacology.

Their courses have fairly similar trajectories, with three rotations in the first year and thesis research begun by fall of the second year. Both Iglewski and Anders use the word *evolving* when speaking of their programs.

Anders says his program "reflects the evolving nature of pharmacology," and Iglewski says, "We're evolving a more interdisciplinary approach, trying to give students as much flexibility as possible."

Dayle Daines, a third-year PhD candidate in microbiology and immunology, was attracted to Rochester by her professors' recommendations, by the caliber of female faculty at Rochester, and by the productivity of Rochester researchers as reflected in journal articles. And she is very much enjoying her research in the lab of Richard Silver, where she is studying the synthesis of the polysialic capsule of *E. coli* K1. "The atmosphere here is very collegial," she says. "My advisor's door is always open. I'm amazed at the amount of interaction between labs, not only among the grad students, but also between mentors and students as well."

Vincent Batori is a second-year graduate student in biophysics. His research involves the structural biology and NMR spectroscopy of an outer surface protein in the cell coating of the Lyme disease virus. "Rochester was doing work I was interested in, and I was looking for a smaller school," he says. "I like the family feeling of the place." For Batori, graduate work at Rochester lets him see the latest in science: "It's exciting to watch the big picture starting to evolve."

Successful applicants tend to have good grades, good GRE's, and research experience. Both programs rely heavily on the personal interview. "We're looking for a curious, articulate student with communication skills, someone who's comfortable talking about ideas," Anders says. The interviewing committee often includes a questioner outside of the student's area of interest, "just to see," in Iglewski's words, "whether he or she perks up and shows interest in broader scientific areas." The committee follows up on letters of reference, calling referees and inquiring about the candidate's motivation and research performance.

Iglewski counsels would-be PhDs to be intellectually flexible and open to change: "You need to evolve as your interests evolve, if you don't want to become a one-time-funded faculty person. And industrial science changes direction constantly. That's

why students need a broad education." And Anders says, "Students should ask themselves, 'What is life really going to be like doing corporate, government, or academic science?' You need to know you want to be here, be driven, have a compulsion for science."

#### **Great Science in a Beautiful Place: Bioscience Programs at Stanford**

STANFORD, CALIFORNIA—About 400 graduate students study in the biosciences programs at Stanford University. The campus is so beautiful that it's hard to imagine anyone getting any work done there, but evidently they do, because Stanford has a worldwide reputation for the finest in innovative research. Stanford's eight departments and four interdepartmental programs compete with the Harvards, MITs, and Cal Techs of the world for the very best—while also looking for the jewel in the road, the deserving scientist without perhaps the glitziest record.

Carl Rhodes, associate dean for graduate education in the school of medicine at Stanford, discusses how the graduate programs are structured: "They include biochemistry and structural biology, biological sciences, developmental biology, genetics, microbiology and immunology, molecular and cell biology, and molecular pharmacology." Interdepartmental programs include those in biophysics, immunology, cancer biology, epidemiology, medical information sciences, health services, and neurosciences. These last two programs are increasingly popular, perhaps reflecting industrial demand for such graduates; relatively larger proportions of graduates from these programs go into nonacademic jobs than do graduates of other programs.

A common admissions committee receives about 900 applications each year. Each applicant may apply to as many as three of the programs. Applications are distributed accordingly, and the various programs determine the applicants to be interviewed. About 200 applicants come on a single gala weekend (in collaboration with UC Berkeley and UC San Francisco). About 150 offers are made, and from 40 to 50 percent of those offers are accepted. "Students enter the program that accepts them," Rhodes says, "but after the

continued ►



# STUDY THE LIFE SCIENCES

at the **UNIVERSITY OF COLORADO** at BOULDER



## MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY

### SPECIALIZING IN THE STUDIES OF:

- Developmental biology in Mice, *Drosophila*, and *C. elegans*
- RNA sciences
- Cell biology
- Plant science
- Signal transduction

### CONTACT INFORMATION:

MCDB GRADUATE SECRETARY  
UNIVERSITY OF COLORADO  
Campus Box 347, Boulder, CO 80309-0347 (303)492-7230  
Email: mcdbrgradinfo@beagle.colorado.edu

## INTERDISCIPLINARY CERTIFICATE PROGRAMS

- Biotechnology
- Behavioral Genetics
- Cognitive Science
- Neuroscience and Behavior

## OTHER GRADUATE DEPARTMENTS

- Chemistry and Biochemistry
- Environmental, Population, and Organismic Biology
- Psychology

### CONTACT INFORMATION:

THE GRADUATE SCHOOL  
UNIVERSITY OF COLORADO  
Campus Box 26, Boulder, CO 80309-0026 (303)492-7401

## BIOTECHNOLOGY PROGRAM

### INCLUDING OPPORTUNITIES FOR:

- Interdisciplinary coursework
- Crossdisciplinary lab rotations
- Industry internships
- Special seminar programs

### PARTICIPATING DEPARTMENTS INCLUDE:

- Biochemistry
- Chemical Engineering
- Molecular, Cellular and Developmental Biology

### CONTACT INFORMATION:

BIOTECHNOLOGY PROGRAM  
UNIVERSITY OF COLORADO  
Campus Box 424, Boulder, CO 80309-0424 (303) 492-6650  
Email: romige@spot.colorado.edu

## KINESIOLOGY

PROVIDING AN ACADEMIC FOUNDATION FOR UNDERSTANDING HOW MOVEMENT AND PHYSICAL ACTIVITY INFLUENCE THE STRUCTURE AND FUNCTION OF THE HUMAN BODY. SPECIALIZING IN THE STUDY OF:

- Physiology
- Human movement
- Anatomy
- Biomechanics

### CONTACT INFORMATION:

KINESIOLOGY GRADUATE PROGRAM  
UNIVERSITY OF COLORADO  
Campus Box 354, Boulder, CO 80309-0354 (303)492-4009

## BEHAVIORAL GENETICS

STUDYING GENETIC AND ENVIRONMENTAL CONTRIBUTIONS TO INDIVIDUAL DIFFERENCES IN HUMAN AND ANIMAL BEHAVIOR INCLUDING:

- Pharmacogenics
- Molecular genetics
- Quantitative methods
- Human twin and family studies

### PARTICIPATING DEPARTMENTS INCLUDE:

- Environmental Population and Organismic Biology
- Molecular, Cellular and Developmental Biology
- Pharmacology
- Psychology
- School of Pharmacy

### CONTACT INFORMATION:

BEHAVIORAL GENETICS TRAINING PROGRAM  
UNIVERSITY OF COLORADO  
Campus Box 447, Boulder, CO, 80309-0447 (303) 492-7230  
Email: info@ibg.colorado.edu



UNIVERSITY OF COLORADO at BOULDER  
<http://www.colorado.edu>



# *University of Colorado Health Sciences Center*

Explore the Frontiers of Biomedical Research in a New Program  
Leading to the Ph.D. Degree:

## **BIOMEDICAL SCIENCES PROGRAM**

The Graduate School announces a new interdepartmental program designed to train world-class biomedical scientists to apply multidisciplinary approaches that are characteristic of the most successful researchers today and which will be indispensable to biomedical research in the new millennium.

Biomedical Sciences Program Fellows will be enrolled beginning Fall 1998. Following a year of core and elective coursework and laboratory rotations, they will then select a thesis mentor and an area of specialization under the auspices of one of ten basic science Ph.D. degree programs:

BIOCHEMISTRY & MOLECULAR GENETICS

CELL & DEVELOPMENTAL BIOLOGY

EXPERIMENTAL PATHOLOGY

HUMAN MEDICAL GENETICS

IMMUNOLOGY

MICROBIOLOGY

MOLECULAR BIOLOGY

NEUROSCIENCE

PHARMACOLOGY

PHYSIOLOGY

Biomedical Sciences Program Fellows and other UCHSC Ph.D. students receive full support, including a stipend, tuition, and health insurance / services.

The University of Colorado Health Sciences Center -- one of four UC campuses -- is conveniently located in Denver in close proximity to all of the metropolitan recreational and cultural facilities and to nearby mountain hiking, biking, fishing, sightseeing, skiing, and other outdoor activities.

**FOR MORE INFORMATION ON THIS AND OTHER ADVANCED DEGREE PROGRAMS  
AT UCHSC, CONTACT US AT:**

UCHSC Graduate School, Box C-296, 4200 E. 9th Avenue, Denver, CO 80262

Telephone: (303) 315-7928

FAX: (303) 315-6932

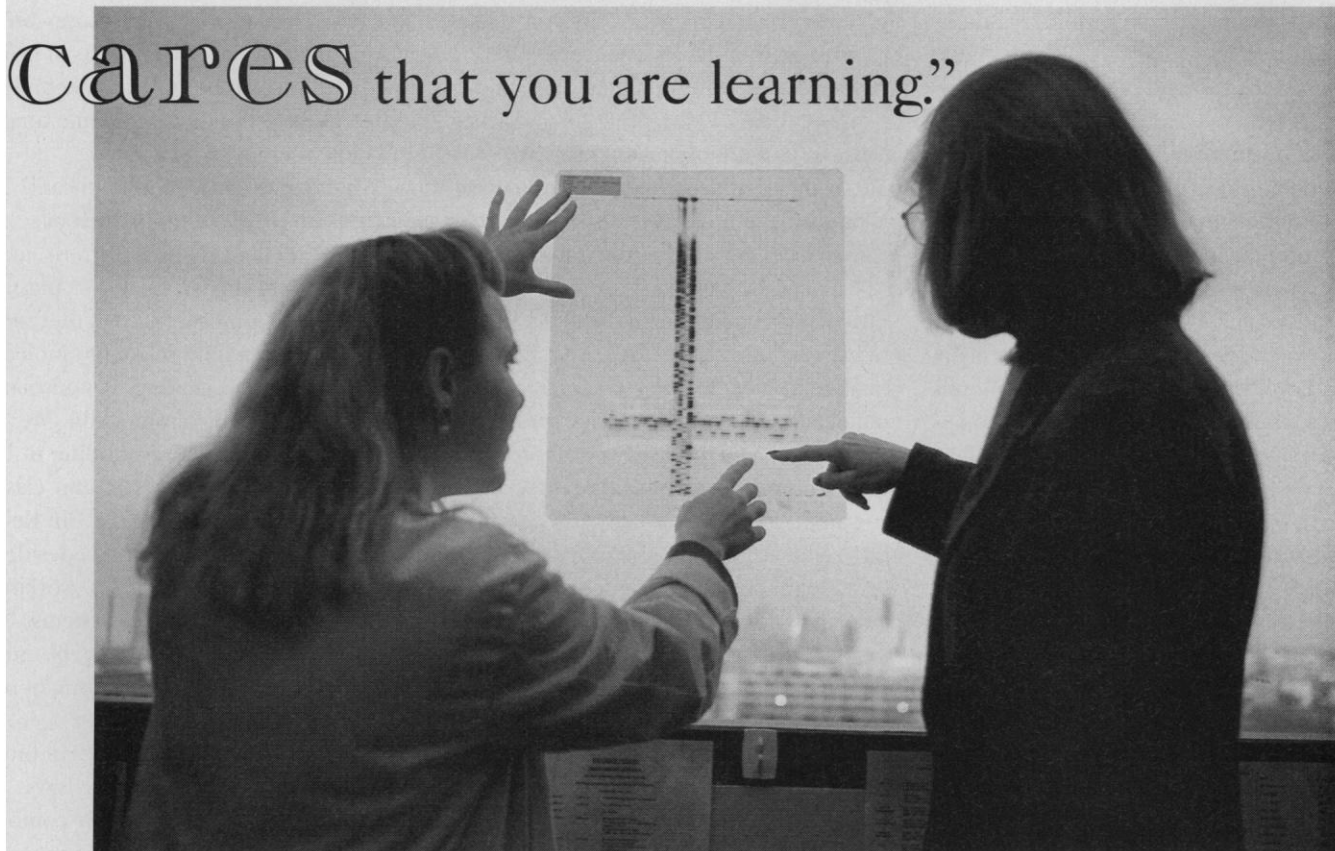
E-Mail contact: [Lynn.Mason@uchsc.edu](mailto:Lynn.Mason@uchsc.edu)

View our WEB HOME PAGE at <http://www.uchsc.edu/gs/gs/index.html>





“it’s much easier to learn  
from someone who  
cares that you are learning.”



**Those are the words of a student** who recently chose the Division of Biology and Biomedical Sciences at Washington University for graduate training. Even a short visit made it clear that graduate study at Washington University takes place in an atmosphere of unobstructed collaboration and collegial support. ♦ The 11 flexible, interdepartmental and interdisciplinary programs will allow you to follow your scientific interests wherever they lead. And, over 300 faculty members are available to provide the direction you need as you begin your career as a scientist. ♦ For more information and an application, contact us at: 1-800-852-9074, or e-mail: [dbbs\\_office@wums.wustl.edu](mailto:dbbs_office@wums.wustl.edu). Our WWW home page address is: <http://medinfo.wustl.edu/dbbs>.



Biochemistry • Bioorganic Chemistry • Developmental Biology  
Evolutionary & Population Biology • Immunology  
Molecular Biophysics • Molecular Cell Biology • Molecular Genetics  
Molecular Microbiology & Microbial Pathogenesis  
Neurosciences • Plant Biology • Combined M.D./Ph.D. Program  
Special Emphasis Pathway in Human Pathobiology

first laboratory rotation they are free to take rotations in any of the other programs." About half of all students take a lab rotation outside their own department, and a quarter end up doing thesis work in a department other than the one in which they entered.

What is the primary criterion for admission? "Research experience," Rhodes says. "It's hard for us to consider applicants seriously unless they've had a significant amount of it. We're interested in people who have very little inertia and are willing to try anything—monoclonal antibodies one day, genetic sequencing the next."

Applicants should also have good communications skills. "That's an important part of the interview," Rhodes says. "In many cases, they'll be addressing people without expertise in their specific area. So the question becomes, How well can they get their work across?" And successful applicants need not have been invariably successful in their work: "Sometimes the scientist who has failed and understands why is a better bet than the scientist who has not recognized failure."

The nature of graduate science programs is changing as science changes. How to attract and retain minority scientists? How to incorporate the computer and information science renaissance into current curricula? How to reflect the fact that many Stanford PhDs—especially in genetics, medical information sciences, and molecular pharmacology—increasingly will consider nonacademic jobs? A recently organized task force is examining whether Stanford should modify its emphases, or at least train its scientists to be aware of other career options. A pilot program will send students to work rotations at nearby Genentech, while Genentech scientists may co-manage some thesis research.

"What we're trying to do," Rhodes says, "is to get a scientist to the point at which he or she is totally independent. At a graduate student's orals, I can always tell that the student is ready for a science career when he or she says, 'I'm really excited about my results, and I've loved being here—but I can't wait to get out on my own and get started doing my own work.'"

That's the kind of people we're looking for and the kind of people we hope we're producing."

### **"Keeping Up with the Changes": The Biozentrum at the University Of Basel**

BASEL, SWITZERLAND—For the past 25 years, the Biozentrum at the University of Basel has brought together the life sciences in offering innovative courses for graduates and undergraduates. Walter Keller, professor and acting chairman at the Biozentrum, says, "We combine six different departments, including cell biology, structural biology, microbiology, biochemistry, biophysical chemistry, and pharmacology/neurobiology."

About 40 students begin the 4-year undergraduate course each year. The first two years are mostly in basic sciences, including mathematics, chemistry, physics, and physical chemistry, and the last two years are more biologically oriented. Students choose a concentration, carry out a laboratory project, and produce a diploma thesis.

Although chemical and pharmaceutical companies do hire graduates fresh out of school, Keller points out that "in Europe it is still quite difficult to find a suitable position with only this diploma, which is why most of our diploma students go on for a PhD." About half stay at the Biozentrum, and others go to universities throughout Europe.

The PhD course lasts 3 to 4 years. The normal first step is for applicants to contact a prospective thesis advisor in whose lab they are interested in working ("They do this in many different ways," Keller says. "Some lab heads advertise. Some students find out about us via our annual report on the Internet. Others send letters and CVs, and still others simply visit."). If that researcher has a position open, applicants then register with the university. The Biozentrum forms a thesis committee, consisting of the advisor and two other experts (one inside and one outside the Biozentrum), which listens to a presentation on the student's progress and gives advice.

The PhD candidate immediately goes into the lab. There is also an accompanying postgraduate lecture course on a broad

range of the latest in molecular genetics, membrane biology, cell biology, integrated systems, developmental biology, and macromolecular structure and function. There are also popular course cycles on plant cell and molecular biology, molecular virology, and biotechnology (which focuses on the making of drugs, applied aspects of protein design, environmental biotechnology, industrial biotechnology, genome analysis, and gene therapy).

"What makes for a good applicant? That depends on the lab and the area of science involved," Keller says. "But most undergraduates know how to grow plasmids, genes, and cDNA. Beyond that, they need a good degree in a field related to molecular biology, with good cloning, gene isolation, and protein purification skills. We also hope for a fairly broad grounding in basic (not just molecular) biology, and classical (not just molecular) physiology." In Keller's specialty, RNA processing, desiderata include experience in genetics, working in both yeast and mammalian systems. "And some biochemistry would also be good," Keller says, "but then, I'm only one of many different specialties."

"Keeping up with the changes in biology is quite a challenge," Keller says. The University of Basel has recently combined the molecular and classical biology courses, to ensure that all undergraduates have exposure to both. And further changes are certain as the field continues to explode and complexify. As Keller puts it, "The idea always is to offer students a larger and larger spectrum of things to choose from." ■

### **August Career Workshop**

Join us for an online discussion group on Compiling an Electronic Resume and Other Job-seeking Skills in the New Technologies at the Science Professional Network Web page ([www.sciencemag.org](http://www.sciencemag.org)). Click on SCIENCE Professional Network, and then click on Career Workshops. Our guest hosts will be Gerry Crispin of Shaker Advertising and Mark Mehler, president MMC Group.



## Graduate Programs



If you're interested in pursuing a graduate degree in the biomedical or biological sciences, come discover the vast and exciting opportunities available to you at the University of Rochester.

At Rochester, you'll work with our renowned faculty who are leaders in their scientific fields. You'll find outstanding training programs that are tailored to the interests of each student. You'll participate in cutting-edge research. And you'll discover

# DISCOVER ROCHESTER

Anatomy  
Biochemistry  
Biology  
Biomedical Engineering  
Biophysics  
Biostatistics  
Brain and Cognitive Sciences  
Chemistry  
Dental Research  
Environmental Studies  
Genetics  
Health Services Research  
Immunology

Industrial Hygiene  
Microbiology  
Neurobiology  
Neuroscience  
Pathology  
Pharmacology  
Physiology  
Public Health  
Toxicology



University of Rochester  
School of Medicine  
and Dentistry

*Graduate Programs in the  
Biomedical and Biological Sciences*

601 Elmwood Avenue, Box 601  
Rochester, New York 14642

716-275-4522

E-mail [gradadm@urmc.rochester.edu](mailto:gradadm@urmc.rochester.edu)

As part of  
a new initiative to  
expand our biomedical research program,  
we've begun construction of a state-of-art, \$73 million research facility on the campus of our Medical Center. We're also adding several world-class scientists to our already-outstanding faculty.

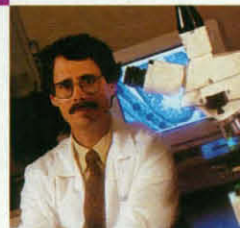
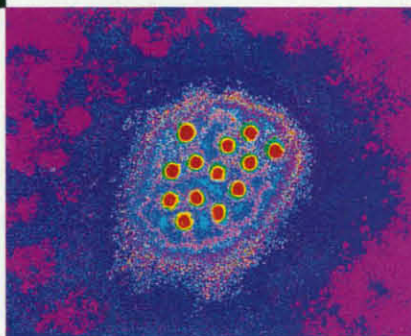
The opportunities for graduate study at Rochester are tremendous. To learn more, visit us on the World Wide Web or call our office of Graduate Studies.

[www.urmc.rochester.edu/smd/grad/urgrad.html](http://www.urmc.rochester.edu/smd/grad/urgrad.html)

why our graduates are so well known for their accomplishments in academia, the private sector, and government.

We understand that today's most exciting research crosses many fields. That's why we've created a scientific environment that fosters interdisciplinary research and collaborative training opportunities. At the University of Rochester we offer programs in anatomy, biochemistry, biology, biomedical engineering, biophysics, biostatistics, brain and cognitive sciences, chemistry, dental research, environmental studies, genetics, health services

research, immunology, industrial hygiene, microbiology, neurobiology, neuroscience, pathology, pharmacology, physiology, public health, and toxicology.



## GRADUATE PROGRAM IN

# MOLECULAR BIOLOGY



**THE UNIVERSITY OF TEXAS AT AUSTIN**

The Graduate Program in Molecular Biology at UT Austin provides a highly interactive, supportive environment with many opportunities to participate in cutting edge research. The strength of the program is indicated by the fact that over 64 faculty from six departments in the College of Natural Sciences (Botany, Chemistry and Biochemistry, Nutrition, Microbiology, Physics, and Zoology) as well as from the Colleges of Pharmacy and Engineering participate in the program. Research interests are equally diverse: molecular structure, gene regulation and function, RNA gene expression, RNA catalysis and evolution, immunology, cancer, viral function and integration, design of drugs that interact with DNA, development, genetics, neurobiology and molecular evolution.

Students receive training through a core curriculum, small seminar courses and access to renowned seminar speakers. Students can choose to conduct their thesis research in a laboratory of one of the 64 participating faculty and the 14 new faculty hired in association with the Institute for Cellular and Molecular Biology.

The cornerstone of the program is the new Institute for Cellular and Molecular Biology which was established to expand and foster the development of molecular biology at The University of Texas at Austin. The Institute is centered in the new 150,000 sq.ft. Louise and James Robert Moffett Molecular Biology Building with state-of-the-art research laboratories, staffed core facilities for nucleic acid sequencing and synthesis, peptide sequencing and synthesis, flow cytometry, electron and confocal microscopy, molecular modeling, graphics and computing. It is situated at the heart of the science buildings on the UT Austin campus.

Opportunities for postdoctoral positions also exist. Inquiries for these positions should be directed to individual faculty members or to:

The Institute of Cellular and  
Molecular Biology  
Molecular Biology Building  
The University of Texas at Austin  
Austin, Texas 78712



Come and join us at this exciting time.  
*For admission information contact:*

Graduate Program in Molecular Biology  
The University of Texas at Austin  
Molecular Biology Building  
Austin, Texas 78712

E-mail: [molbio@hpcf.cc.utexas.edu](mailto:molbio@hpcf.cc.utexas.edu)  
Telephone: (512) 471-2150

A complete listing of faculty and their research interests as well as other information on the graduate program can be found at <http://amoeba.pai.utexas.edu/gradmolbio.html>



*Prepare for an Exciting and Rewarding Career in Biotechnology*

## **Northwestern University Master's Program in Biotechnology**

*Combining Science & Business for a Professional Education in Biotechnology*



*The Northwestern University Master's Program in Biotechnology is nationally recognized as a leader in biotechnology education. Our innovative approach prepares students for careers in the constantly evolving biotechnology industry.*

### **PROFESSIONAL and INTENSIVE ONE-YEAR PROGRAM**

Designed for the motivated and enthusiastic student, our one-year program offers a fast track to a professional career in the biotech industry.

### **FLEXIBLE, INDIVIDUALIZED PROGRAM**

Each student receives personalized counseling for the planning of course work, residency placement, and career development to meet their individual needs.

### **INTERDISCIPLINARY EDUCATION**

To meet the needs of a diverse group of students, courses are designed and taught by a cross-section of instructors including university professors and industry professionals.

### **INNOVATIVE LEARNING**

Students take an active role in learning by studying and presenting current case studies through role playing workshops. These are designed to enhance problem solving skills and foster team building as well as leadership abilities.

### **INDUSTRY CONTACT**

The Center for Biotechnology's various outreach efforts affords students unique opportunities to interface with leaders in the biotechnology community.

### **PRACTICAL EXPERIENCE**

Each student gains hands-on, practical experience with the completion of both an **academic** and **industrial** residency with one of the many participating biotechnology companies.

### **AREA OF SPECIALIZATION**

In addition to core courses that combine science and business issues important to the biotech industry, students design a curriculum in an area of specialization to gain rigorous scientific training in one of five key areas:

- Genetic Engineering
- Cell Biology/Antibody Technology
- Bioprocess/Biomedical Technology
- Medicinal Chemistry
- Bioinformatics

### **RESULTS**

Prepared for the increasingly interdisciplinary, collaborative, and competitive biotech industry, our graduates are very successful in the job market. Our graduates pursue diverse and rewarding careers from R&D to business management and investment to patent law.

*For further information please contact:*

**The Center for Biotechnology  
Northwestern University  
1801 Maple Avenue  
Evanston, IL 60201**

**Telephone: (847) 467-1453; E-mail: [biotech@nwu.edu](mailto:biotech@nwu.edu)  
web address: <http://www.nucb.nwu.edu>**

*Northwestern University reserves the right to change without notice any statement in this publication concerning, but not limited to, curricula, and courses. It is the policy of Northwestern University not to discriminate against any individual on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or veteran status in matters of admission or in the educational programs or activities it operates, in accordance with civil rights*

# ... YOUR WORK CAN MAKE A DIFFERENCE IN OUR LIVES

**SAIC Frederick**, a division of Science Applications International Corporation, the world's largest employee-owned scientific, technical and engineering sciences company, works at the forefront of biomedical research at the National Cancer Institute's Frederick Cancer Research & Development Center. **SAIC Frederick** is a contemporary biotechnology organization dedicated to the development of knowledge and tools for diagnosis, treatment and prevention of human cancer and AIDS.

Our scientists work collaboratively with NCI counterparts in developing and applying scientific tools in projects ranging from gene analysis at the molecular level to newer methods of cancer treatment. As part of the SAIC investigative team, you will work closely with colleagues of distinguished reputation - true pioneers in the quest to conquer cancer and related diseases. You'll work in the most progressive laboratories where creative research equipment and sophisticated computer systems, including IBM, DEC Alpha, Cray Y-MP, Sun, SGI, Convex (HP) and Pentium workstations employing Windows NT, Unix, OpenVMS, Oracle7, SAS, C, C++, FORTRAN and Pascal, will be at your disposal.

Currently, we are seeking individuals with the following credentials:

- **BIOCHEMICAL ENGINEER (S5357):**  
PhD chemical/biochemical engineering with 3 years' experience in microbial fermentation and recovery process development.
- **SCIENTIFIC APPLICATIONS ANALYST (S5302):**  
MS/BS molecular biology/ computational chemistry with 2-3 years' computer experience in genetic analysis programs (BCG, Blast, FastA).
- **SENIOR RESEARCH ASSOCIATE (S5372):**  
MS/BS with 5-6 years' experience in flow cytometry, particularly in the use of multiple lasers and 2- and 3-color cytometry.

- **RESEARCH ASSOCIATE (S5309):**  
MS/BS chemistry with 2 years' experience in mass spectrometry, capillary and microbore HPLC, PAGE, and Western Blots.
- **RESEARCH ASSOCIATE (S5429):**  
MS/BS biology/molecular biology/virology with 2-5 years' experience working with infectious agents, protein purification, molecular cloning, HPLC, PCR, spectrophotometric assays and tissue culture.
- **BIOPHARMACEUTICAL MANUFACTURING SPECIALIST (S5247):**  
MS/BS microbiology with 2 years' experience in a pharmaceutical/fermentation environment; cGMP/FDA requirements.
- **SAFETY OFFICER (S5446):**  
MS/BS environmental/biological/industrial safety with 4-6 years' experience preferably at a science/engineering facility or educational institution.
- **SENIOR SAFETY SPECIALIST (S5445):**  
BS biological/radiation safety with 2-5 years' experience in radiological monitoring, isotope delivery, decontamination, waste disposal and lab analysis.
- **SENIOR RESEARCH TECHNICIAN (S5447):**  
BS biology/molecular biology with 2-5 years' experience in subcloning, sequencing, mRNA and protein purification, immunoblotting, *in vitro* transcription and translation.

You'll work in a campus-like setting in Frederick, Maryland, near Baltimore and Washington, DC.

**SAIC Frederick** offers a competitive salary and comprehensive fringe benefits program, including insurances, 401(k) savings plan, stock purchase programs, tuition assistance and more.

For consideration, forward your resume to: **SAIC Frederick**, NCI-FCRDC, Barbara J. Norton-Gill, Technical Recruiter, PO Box B, Frederick, MD 21702-1201; e-mail: [hr@mail.ncifcrf.gov](mailto:hr@mail.ncifcrf.gov). Please reference job code.

**"We value cultural diversity in the workplace."**



**SAIC Frederick**

A Division of Science Applications  
International Corporation





## NPS PHARMACEUTICALS

NPS Pharmaceuticals Inc. discovers and develops innovative drugs that target cell surface receptors and ion channels to treat a variety of important diseases. The Company is pursuing small molecule therapies for key endocrine, bone, and central nervous system disorders and is pleased to announce the following job opportunities;

### MASS SPECTROSCOPIST

#### Primary Responsibilities

The selected individual will develop and validate analytical methods for the quantitation of experimental drugs in biological samples. This individual is expected to have 1–2 years experience in tandem mass spectrometry (LC/MS-MS), bioanalytical methods development, and mass spectral interpretation for structural identification. In addition, the ability to interact effectively with other scientists and supervise technical personnel is required.

#### Specific Duties

- Conduct analyses of drug and metabolite concentrations in biological samples
- Elucidate the structures of drug metabolites
- Verify the structures of combinatorial and conventional synthetic products
- Supervise technical personnel and schedule work
- Operate/maintain tandem mass spectrometer
- Develop bioanalytical methods
- Interpret mass spectra

#### Job Qualifications

- Ph.D. in Chemistry with a minimum of 1–2 years or M.S. with 5–7 years of experience with the following:
- Hands-on experience in the operation and maintenance of tandem mass spectrometers
- Experience in the development of bioanalytical methods
- Ability to effectively interpret mass spectra

Please reference job #700-DSW7/14/97-0001 within your cover letter.

### RESEARCH ASSOCIATE II/III

#### Primary Responsibility

This position will work with a team of Scientists in an effort to design, synthesize, and develop novel pharmaceuticals.

#### Specific Duties

- Synthesize and purify a variety of experimental drugs for evaluation in biological assays
- Use and maintain lab automation equipment
- Evaluate compound purity and identify compound structure using standard procedures (GC/MS, TLC, HPLC, and NMR)
- Maintain a current understanding of the scientific literature within a given area (combinatorial/organic chemistry)
- Maintain an accurate record of experiments performed
- Summarize and report experimental results to supervisor and team members
- Provide interpretation and input of experimental results

#### Job Qualifications

- B.S. in chemistry with 2–8 years of experience in the pharmaceutical industry or an M.S. in chemistry with at least 1 year of experience in the pharmaceutical industry or equivalents thereof is required
- Experience in non-peptide combinatorial and/or multiple parallel synthesis is desired

Please reference job #500-RB-6/20/1997-0001 within your cover letter.

### RESEARCH ASSOCIATE II/III

#### Primary Responsibility

This position will work with a team of Scientists in an effort to design, synthesize, and develop novel pharmaceuticals.

#### Specific Duties

- Synthesize and purify a variety of experimental drugs for evaluation in biological assays
- Evaluate compound purity using standard analytical procedures (GC/MS, TLC, HPLC and NMR)
- Confirm compound structure using standard spectroscopic methods (MS, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR, IR, and UV)
- Maintain a current understanding of the scientific literature within a given area (organic chemistry)
- Maintain an accurate record of experiments performed
- Summarize and report experimental results to supervisor and team members
- Provide interpretation and input of experimental results

#### Job Qualifications

- B.S. in chemistry with 2–8 years of experience in the pharmaceutical industry or an M.S. in chemistry with at least 1 year of experience in the pharmaceutical industry or equivalents thereof is required

Please reference job #500-RD-7/7/1997-0001 within your cover letter.

Please mail your resume to:

**NPS Pharmaceuticals, Inc.**  
**Human Resources**  
**420 Chipeta Way**  
**Salt Lake City, UT 84108**  
**jobs@npsp.com**

# SMITHSONIAN ASTROPHYSICAL OBSERVATORY

The Smithsonian Astrophysical Observatory is developing the AXAF Science Center (ASC) and the AXAF Operations Control Center (OCC) in Cambridge, MA. Scheduled for launch by NASA in 1998, AXAF is a large, orbiting x-ray telescope which will search the universe for x-rays from high-energy sources such as black holes, quasars, and supernova remnants. The ASC will conduct observation planning, telemetry processing, x-ray data analysis, on-orbit calibration, and archival data management. The data system is a large-scale, UNIX-based distributed computing environment, utilizing state-of-the-art software, networks, and data management. AXAF will be operated from the OCC.

## Archive Astrophysicist

### Requirements:

- Ph.D. or equivalent doctoral degree in astrophysics, physics, or astronomy, with emphasis in the field of x-ray astronomy
- Research experience in observational astronomy with special emphasis on space astronomy
- Extensive experience and demonstrated leadership in the field of data management, databases, archival research, and modern x-ray data analysis software development
- Thorough familiarity with modern computer techniques, including large computer systems, mini-computers, and workstations

(Job Code 97AA-SCI)

## Ground System Operators

### Requirements:

Requires hands-on experience with UNIX. Experience in one or more of the following areas:

- Spacecraft operations
- Dealing with customers and providing support to a user community
- Providing guidance or training to others
- Knowledge of C, C++, and Oracle

(Job Code 9771-SCI)

## Software Developers

### Requirements:

Requires hands-on experience with UNIX/C, C++ design and development. X-Windows experience a plus. Experience in one or more of the following areas is desired:

- Data systems to acquire and process data in experimental situations
- Writing scientific analysis software
- Shell programming
- Relational database design and development (preferably Sybase)
- Open Client, Open Server, SQL
- Multilayered software API development, C or C++
- Telemetry processing
- GUI and X-Windows development

(Job Code 9743-SCI)

We offer a competitive salary and excellent benefits. For consideration, please reference the appropriate Job Code and send your resume with salary history to Recruiter 229, Smithsonian Astrophysical Observatory, 60 Garden Street, MS 17, Cambridge, MA 02138. No phone calls please.

Visit our web site at <http://cfa-www.harvard.edu>

## Computer/Data Specialists Research Assistant

### Requirements:

- B.S. or M.S. in physics-related discipline
- Experience in computer programming in a UNIX environment
- Knowledge of astronomical or other image-processing techniques; the IRAF and IDL environments, FORTRAN, all highly desirable.

(Job Code 96-SCI)

## Astrophysicists

We are seeking Astrophysicists to join our High Energy Astrophysics Division to participate in a research program on stellar and interstellar plasmas with emphasis on x-ray emission lines. The work involves the reduction and analysis of spectral data from high energy astrophysics emissions with emphasis on stellar coronae or other collisionally-ionized emission sources. This position will be for one year initially, with possibility of renewal for a second year.

The ideal candidate must possess, at a minimum, a master's degree in physics, astrophysics, or astronomy, plus knowledge of plasma modeling, familiarity with relevant atomic processes, and experience with plasma diagnostic techniques. This position provides an opportunity to develop spectroscopic tools for wide use in the astrophysics community.

(Job Code #9784-SCI)

OTHER OPPORTUNITIES ALSO AVAILABLE FOR:

- **Systems Management**
- **Web Specialist**
- **Sybase Administrator**



**Smithsonian  
Astrophysical  
Observatory**

*We are an equal opportunity employer committed to diversity in our workplace.*



# 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.



**Pharmaceutical  
Division**

**MOLECULAR BIOLOGISTS**

**BIostatisticians**

**SAS PROGRAMMERS**

**BIOCHEMISTS:**

**ENZYME KINETICS, CELL BIOLOGY**

**CHEMISTS:**

**STRUCTURAL, MEDICINAL,  
SCALE-UP AND COMBINATORIAL**

- 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 \$32 billion international diversified organization and one of the most broadly-based healthcare companies in the U.S. Our Pharmaceutical Division has responsibility for the research and development of treatments for cancer, metabolic disorders, rheumatic diseases, infectious diseases, cardiovascular diseases and dementia.

**MEET WITH US AT THE**

**SCIENCE CAREER FAIRS  
MIT CAMPUS  
CAMBRIDGE, MA**

**Friday, September 5th**

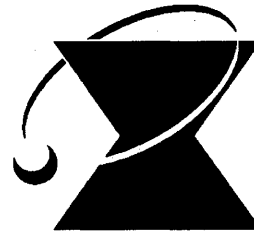
**Saturday, September 6th**

- ...and there's one more fact. If you're ready to join us, there's no better time than now. If you're unable to attend, please, send your resume with salary history to: Susan O'Connor, Pharmaceutical Recruiter, Bayer Corporation, Pharmaceutical Division, 400 Morgan Lane, West Haven, CT 06516. FAX (203) 812-3188. E-MAIL [susan.o'connor.b@bayer.com](mailto:susan.o'connor.b@bayer.com). No phone calls please.

*For more information on Bayer, search:  
<http://www.careermosaic.com/cm/bayer/>*

- An Equal Opportunity Employer M/F/D/V. Bayer Corp. is committed to enhancing and maintaining cultural diversity within our work environment.

**Megabios Corp.** provides proprietary gene delivery systems and preclinical development expertise to create gene-based therapeutics for the treatment and prevention of genetic and acquired diseases. Our continued growth has created several employment opportunities for qualified candidates. All Megabios programs are aimed at utilizing gene therapy technology and Megabios' proprietary non-viral delivery systems.



**Megabios Corp.**

**Animal Resources Manager/Pharmacologist**

In this key role, you will supervise and manage an animal resources group, coordinate ongoing models, and establish new animal programs in specific disease areas. Responsibilities include collaborating with senior investigators to develop and coordinate protocols aimed at utilizing gene therapy technology, assuming a leadership role in expanding the current facility and documentation, establishing an IACUC, and working towards AALAC accreditation and establishing specialized surgical expertise. Qualifications include a D.V.M. or Ph.D. in biology, pharmacology, or related field and 7+ years' research or animal facility/modeling experience in the biotech or pharmaceutical industry. Familiarity with IACUC procedures, AALAC accreditation needed. Prefer facility management experience or AALAS certification. Job Code: ARM/BLW

**Scientist, Histotechnology/Pathology**

The successful candidate will be responsible for image analysis, tissue staining, and pathological specimen interpretation. Responsibilities include developing and performing staining techniques, interpreting slides, and preparing summary reports. Qualifications include a D.V.M. or Ph.D. in biology, histology, pathology, or related field and 5+ years' research experience. Experience in flow cytometry is desirable. Job Code: HP/BLW

**Scientist, Nucleic Acid Detection**

The successful candidate will develop, validate, and implement quantitative assays for the detection of specific DNA and RNA sequences in mammalian systems. Responsibilities include data analysis, assay troubleshooting, and managing junior investigators. Qualifications include a M.S. with 3–5 years' experience in a biotechnology environment or a Ph.D. with 0–2 years' experience. Expertise in quantitative PCR assays, solution hybridization techniques, quantitative Southern blot, Northern blot, and basic molecular biology skills required. Experience with \*real time\* quantitative PCR instrumentation preferred. Job Code: SNAD/JV

**Scientist, Pharmaceuticals**

The successful individual will possess a Ph.D. in pharmaceutical sciences, physical chemistry, chemical engineering, or biophysics and have 3+ years' experience in an industrial biotechnology setting. This individual will be responsible for the development of DNA formulations suited for pulmonary delivery. Their efforts will be directed toward non-viral lipid and non-lipid based formulations. A background in colloid and/or surface chemistry would be beneficial. The individual will also be expected to develop external collaborations and to work within a team framework. Job Code: DNAF/PD


**Scientist, Pharmaceuticals**

The successful candidate will develop, formulate, and characterize non-viral DNA delivery systems, both lipid and non-lipid based. Familiarity with polymer chemistry, structural analysis, and colloid and/or surface chemistry would be beneficial. Qualifications include a M.S. with 3–5 years' experience in a biotechnology environment, or a Ph.D. in pharmaceutical sciences, physical chemistry, biophysics, or biochemistry with 0–2 years' experience in an industrial biotechnology setting. Job Code: NVDS/RN

**Megabios** offers a highly competitive compensation and benefits package, and values the contributions of its diverse workforce. Qualified candidates are encouraged to send or fax their CV's, indicating job code, to:

**MEGABIOS**  
Human Resources  
863A Mitten Road  
Burlingame, CA 94010  
Fax (415) 652-1990  
[www.megabios.com](http://www.megabios.com)





**The Netherlands Organization for Scientific Research (NWO) has been established by act of law. The organization's objective is to promote scientific research. It employs approximately 4.000 researchers. Most of them work at the universities, a smaller part at institutes of the NWO-foundations.**

The Space Research Organisation Netherlands (SRON) stimulates and co-ordinates scientific research in and from space. For that purpose SRON maintains a research institute, at which instruments for astrophysical and earth-oriented research are developed, built and used. In addition, SRON subsidizes Dutch researchers who carry out experiments in space like in the fields of life sciences and microgravity research. SRON also advises the Dutch government with regard to Dutch participation in international scientific programs.

SRON has its Infrared and Sub-mm activities largely concentrated in the Institute in Groningen. In close collaboration with the Laboratory of Applied Physics, the University of Groningen, SRON has successfully developed heterodyne mixers based on superconductive junctions up to 1 THz frequency, aiming for participation in the heterodyne experiment onboard ESA's sub-mm satellite FIRST.

Recently funding has become available for research on heterodyne receivers up to 2.5 THz by means of Hot Electron Bolometer Mixers (HEBM). The research has started with Niobium diffusion-cooled bolometer mixers (LTS HEBM) in collaboration with the University of Groningen. A consortium for the development of a High Temperature Superconductor (HTS) HEBM will soon be set up.

For research on these projects the division Sensor Research and Technology at SRON has a

## post-doctoral research position

**Task description:** the candidate will work on the research and development of both LTS and HTS HEBMs.

His/her main responsibility will be the microwave and optical aspects of the heterodyne receivers, including analysis, design, construction, and test of microwave circuits. The focus will be high frequency, e.g. 2.5 THz. He/she will take a leading role in the HTS HEBM project. He/she should also take responsibility for the maintenance of the microwave test instruments. The work is performed together with a post-doctoral researcher and Ph.D. students, and in collaboration with other foreign institutes working in this field.

**Requirements:** PhD in applied solid state physics or microwave engineering; experience in developing, building and testing of instrumentation; research experience on microwave detectors is considered a strong advantage; self-organizing workstyle, good team player and good communicative skills.

**Employment conditions:** the employee will be stationed in Groningen. Temporary employment will be in the service of NWO for a period of three or five years, depending on the quality of the candidate. The first three years of that period will be dedicated to the above indicated research. For the next two years a role as heterodyne mixing expert on the heterodyne instrument for ESA's sub-mm satellite FIRST is envisaged. A permanent appointment after this period is not excluded. However, this will depend on SRON's strategy for the sub-mm research and the proven quality of the candidate.

The salary will be in accordance with the official salary scales for government employees on research positions: Scale 10/11 with a maximum of Dfl 6,155.- (scale 10), Dfl 7,196.- (scale 11) gross per month on a full-time basis, depending on the level of experience.

**For information** please contact Dr. P. de Korte at SRON-Utrecht, telephone (0)30-2535710, E-mail: P.deKorte@srn.ruu.nl or Dr. J.R. Gao at SRON-Groningen, telephone (0)50-3634866, E-mail: Gao@phys.rug.nl.

**Letters of application** for this position with a CV and the names of three referees should be sent within two weeks after publication of this advertisement to SRON, Department of Personnel and Organisation, Sorbonnelaan 2, 3584 CA UTRECHT, The Netherlands. Please state the vacancy number SRON 97-006 on letter and envelope.

*Women in particular are encouraged to apply.*

**More information about NWO:** <http://www.nwo.nl>



NWO

Japan Society for the Promotion of Science



# Postdoctoral Fellowships for American Researchers

Pursuit of Advanced Research at Japanese Universities

To promote scientific cooperation between the United States and Japan, the Japan Society for the Promotion of Science (JSPS) provides long-term and short-term fellowship programs for promising and highly qualified young researchers from the United States. These fellowships afford U.S. researchers an opportunity to conduct research in laboratories at Japanese universities and university-related research institutions.

JSPS is a quasi-governmental organization that operates under the auspices of Japan's Ministry of Education, Science, Sports and Culture (Monbusho) and focuses on advancement of science as its primary mission.

## How to Apply

There are two channels for applications

### 1. Application through a Nominating Institution

Applicants (U.S. citizens or U.S. permanent residents) should contact one of the nominating institutions listed below for application forms. All applicants are required to have a prior commitment from a Japanese host researcher to work cooperatively on a research project.

#### U.S. Nominating Institutions

- National Science Foundation  
4201 Wilson Boulevard, Arlington, VA 22230, Tel. 703-306-1701  
Mr. Randall J. Soderquist, Japan and Korea Program, Division of International Programs, e-mail. JKPinfo@nsf.gov
- National Institutes of Health (Fogarty International Center)  
Building 31 Room B2C11, Bethesda, MD 20892, Tel. 301-496-4784  
Dr. Allen Holt, Program Officer, e-mail. jsps@nih.gov
- Social Science Research Council  
810 Seventh Avenue, New York, NY 10019, Tel. 212-377-2700  
Ms. Sheri Ranis, Program Officer, e-mail. ranis@ssrc.org



## A. Long-term Fellowships for American Researchers

<b>Research Fields</b>	All fields of research (natural sciences, engineering sciences, medical sciences, social sciences, and humanities)
<b>Host Research Institutions</b>	Japanese universities and university-related research institutions
<b>Fellowship Tenure</b>	A period of 12 to 24 months
<b>Terms of Award</b>	<ul style="list-style-type: none"><li>●A round-trip air ticket (economy class) for the fellow only</li><li>●A monthly stipend of ¥270,000 (\$2,455)</li><li>●A settling-in allowance of ¥200,000 (\$1,818)</li><li>●A monthly housing allowance of up to ¥100,000 (\$909)</li><li>●A monthly family allowance of ¥50,000 (\$455), if accompanied by dependent(s), and</li><li>●Accident and sickness insurance coverage for the fellow only</li></ul> Fellows are eligible to apply for the Monbusho's research grants. (Dollars figures in parentheses are approximate sums converted at ¥110 to \$1.)
<b>Eligibility</b>	Candidates must be US citizens or US permanent residents and hold a doctorate degree that was received within less than six years of April of the fiscal year in which the fellowship commences.

## B. Short-term Fellowships for American Researchers (new program)

The research fields, host research institutions and terms of awards are the same as those of the Long-term Fellowships. In addition, a research/domestic travel allowance of ¥150,000 (\$1,364) is provided. Fellows are not eligible to apply for the Monbusho's research grants.

<b>Fellowship Tenure</b>	A period of 3 to 11 months
<b>Eligibility</b>	Candidates must be US citizens or US permanent residents and hold a doctorate degree that was received within less than ten years of April of the fiscal year in which the fellowship commences.

## 2. Application through a Japanese Host Researcher

Japanese researchers may apply for a fellowship on behalf of an American researcher. JSPS provides application forms to Japanese researchers. Application periods are in May and September. JSPS makes selections from applications submitted by the prospective Japanese host researchers.

**Further information** can be obtained from the nominating institutions in the U.S. or from JSPS:

- JSPS Washington Liaison Office  
1800 K Street N.W. Suite 920, Washington D.C. 20006, U.S.A.  
Tel. 202-659-8190 e-mail. webmaster@jpsusa.org
- JSPS Fellows Plaza in Tokyo  
Jochi Kioizaka Bldg., 6-26-3, Kioicho, Chiyoda-ku, Tokyo 102  
Tel. 03-3263-1721

Note 1: Besides the US, JSPS administers long-term fellowship programs for young non-Japanese researchers in other countries around the world. For further information, please contact JSPS.

Note 2: NSF will not accept applications for Short-term Fellowships unless the applicant is already affiliated with a NSF-sponsored research project or center. Applicants for Short-term Fellowships who are not currently affiliated with a NSF-sponsored research project or center must apply through a Japanese host researcher.

*Cadus Pharmaceutical Corporation, a leader in the discovery of drugs which regulate G protein-mediated signaling pathways, is expanding its discovery programs based upon its unique proprietary yeast and mammalian cell based screening technologies and has openings for motivated scientists in the following areas:*

## DRUG DISCOVERY/ CELL BIOLOGY

**Code: S-DD BS/MS** scientists with a minimum of 2 years laboratory experience with strong background in molecular biology, mammalian cell culture, and receptor signal transduction research. Previous experience in molecular target-based drug discovery is also desirable. Qualified individuals will work within the drug discovery group exploring cellular signaling pathways and designing/implementing secondary assay systems to analyze potential therapeutics.

AND

**Code: S-DD2 BS/MS** scientists with a minimum of 2 years experience in mammalian cell biology to join our drug discovery group. Experience with mammalian cell culture signal transduction analyses, biochemistry, molecular biology, flow cytometry and microscopy is desirable. Qualified individuals will work on projects focusing on the regulation of cell activation and growth by G protein-coupled receptors.

## MAMMALIAN CELL BIOLOGY

**Code: S-M BS/MS** scientists with a minimum of 2 years experience or Ph.D. scientists with a minimum of 3 years postdoctoral research in mammalian cell biology and gene expression to join our assay development group. Expertise with mammalian cell culture, signal transduction analysis and strong molecular biology skills are essential. These individuals will be working with projects involving novel whole cell assay systems for G protein-coupled receptor signaling.

## MOLECULAR/YEAST BIOLOGY

**Code: S-MYB BS/MS** scientists with a minimum of 2 years experience or Ph.D. scientists with a minimum of 3 years postdoctoral research experience in molecular biology for a project expressing mammalian signal transduction proteins in yeast. Background in cellular and molecular biology or biochemistry is required. Experience with yeast and protein analysis is preferred.

## NEW LEADS DISCOVERY

**Code: S-NL BS/MS** scientists with a minimum of 2 years experience in assay development or screening. Experience with yeast and/or mammalian cell culture techniques, cell-based screening assays and/or HTS robotics/automation is desirable. Responsibilities include pilot and implementation of novel cell-based screens for G protein-coupled receptor targets, performing selectivity assays and identifying lead compounds in support of internal drug discovery efforts.

*Cadus offers competitive salaries and benefits as well as excellent opportunity for career growth in a stimulating collaborative environment. Send CV and List of References, indicating job code to: Cadus Pharmaceutical Corporation, 777 Old Saw Mill River Road, Tarrytown, NY 10591-6705; or email at: [hr@cadus.com](mailto:hr@cadus.com). Cadus is an Equal Opportunity Employer.*

# CADUS

PHARMACEUTICAL CORPORATION



## National Health Research Institutes

National Health Research Institutes is a newly established non-profit organization in Taiwan, R.O.C., taking in part the format of NIH in the United States, MRC in Britain, and CNRS in France. The mission of NHRI is to gain new knowledge and medical treatment that would lead to better health care. To that end, NHRI has research grant support for institutions throughout the country and is establishing ten intramural research divisions in biomedical engineering, biostatistics, biotechnology and pharmaceutical research, cancer research, clinical research, environmental health and occupational diseases, gerontology, health policy, mental health and drug abuses, and molecular and genomic medicine.

Currently, the following four divisions have openings for promising candidates:

### Division of Clinical Research

The Division of Clinical Research is establishing a Bacterial Reference Laboratory as a national resource to study antibiotic resistance in hospital isolates. We invite applications from microbiologists with Ph.D., M.D., or master degrees who are interested in medical and pathogenic bacteriology. Those proficient in diagnostic and/or molecular microbiology are welcome. Laboratory director and supervisory personnel are needed at the level of Investigator, Associate Investigator, or Assistant Investigator (equivalent to Professor, Associate Professor, and Assistant Professor). **Director: Monto Ho, M.D. (Tel: 886-2-653-4401 ext.7121)**

### Division of Biotechnology and Pharmaceutical Research

The Division is dedicated to discovery and preclinical development of new drugs for cancer and infectious disease. We have positions open at the level of Investigator, Associate Investigator, or Assistant Investigator in the areas of tumor biology, cell biology, protein chemistry, molecular virology, animal models, pharmacokinetics, drug metabolism, medicinal chemistry, and combinatorial chemistry. Individuals with Ph.D. and established records, particularly in pharmaceutical research and development, are welcomed. Postdoctoral positions are also available. **Director: Ming-Chu Hsu, Ph.D. (Tel: 886-2-653-4401 ext.8301)**

### Division of Biostatistics

The Division cordially invites outstanding researchers to apply for positions at the level of Assistant Investigator, Associate Investigator, and Investigator. Postdoctoral positions are also available. Candidates should have a Ph.D. or equivalent in statistics, biostatistics, or related fields. Established records of statistical and collaborative research in health-related sciences are very much welcome. **Director: Chao Agnes Hsiung, Ph.D. (Tel: 886-2-653-4401 ext.6662)**

### Division of Molecular and Genomic Medical Research

The Division has openings at the Assistant Investigator level. This division is committed to the identification of genetic determinants of diseases prevalent in Taiwan. The initial focus is on gastric and liver cancers with emphasis on the studies of oncogenes, tumor susceptibility genes, and signal transduction. Individuals with the above expertise are encouraged to apply. In addition, a Ph.D.-level staff position is available to develop Bioinformatics for this Division. Individuals familiar with database in molecular and genetic research are welcome. **Director: Hsing-Jien Kung, Ph.D. (Tel: 886-2-653-4401 ext.6121)**

Application should include a letter of intent, curriculum vitae with publication list, a brief description of research interest, reprints of selected publications, and three reference letters. Please forward your application to the Director of each division at

National Health Research Institutes

128 Yen-Chiu-Yuan Road, Sec II

Taipei 115, Taiwan, R.O.C.

Tel: 886-2-653-4401 ext.8110; Fax: 886-2-651-3723





# NATIONAL UNIVERSITY OF SINGAPORE

## LEE KUAN YEW POSTDOCTORAL FELLOWSHIP

Applications are invited for the **Lee Kuan Yew Postdoctoral Fellowship** from candidates with excellent academic records and proven research ability, and who had obtained their PhD degrees in the last few years. The Fellowship will be tenable for up to 3 years in the first instance, with possible extension for 2 further years. It will be held concurrently with the candidate's appointment as a research staff member in the Faculty/Institute working on any of the following identified research areas:

### FACULTY OF ENGINEERING

#### Chemical Engineering

- Separation and Adsorption
- Materials and Devices
- Chemical Engineering Fundamentals
- Environmental Science and Technology

#### Civil Engineering

- Soft Ground Engineering
- Coastal Zone Management
- Concrete Technology

#### Electrical Engineering

- Silicon Integrated Circuit Technology
- Multimedia and Wireless Communications
- Data Storage Technology

#### Mechanical Engineering

- Computational Fluid Mechanics
- Intelligent Manufacturing
- Micro-electromechanical Systems (MEMS)
- Biomaterials

### FACULTY OF MEDICINE

- Immunology
- Pædiatric Allergy and Immunology
- Cancer Epidemiology
- Molecular Epidemiologic
- Environmental Health and Toxicology
- Health Service Research

### FACULTY OF SCIENCE

#### School of Biological Sciences

- Orchid Biology
- Plant Molecular Biology
- Marine Microbiology
- Larviculture/Aquaculture
- Fish Molecular Biology

#### Information Systems & Computer Science

- Multimedia Information Processing
- Programming Technology and Software Engineering
- Parallel and Distributed Computing
- Computer Security and Electronic Commerce

### INSTITUTE OF SYSTEMS SCIENCE

- Multimedia
- Pattern Recognition
- Broadband Networking
- Natural Language Processing
- Information Security

Under the Fellowship, a tax-free stipend of US\$1,500 per month will be provided. This will be in addition to the following terms of appointment provided to a research staff member:

- Gross annual salary ranges from S\$52,000 to S\$74,300, with commencing salary depending on qualifications and experience (US\$1.00 = S\$1.41 approximately).
- Leave and medical benefits will be provided. Other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance, subsidised housing, passage assistance, and baggage allowance on appointment.

Applicants should send their detailed curriculum vitae and list of publications (including their fax number/e-mail address) and the names and addresses of three referees to **The Director, Personnel Department, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260; Telefax: (65) 778 3948 or Internet: perleesk@leonis.nus.sg.**

Closing Date: 30 September 1997. Only shortlisted candidates will be notified.



**ORGANIC CHEMISTRY  
SENIOR FACULTY POSITION  
DEPARTMENT OF CHEMISTRY  
The Ohio State University**

The Department of Chemistry at The Ohio State University seeks to recruit a **SENIOR ORGANIC CHEMIST** to its faculty. This individual will have premier laboratory space in our newly constructed Newman and Wolfgram Laboratory of Chemistry. We wish to hire an individual at the senior level to begin autumn 1998. Applications received before October 15, 1997, will be given full consideration. Candidates should submit a curriculum vitae, a statement of research and teaching interests, and names of three references to:

**Chair, Senior Organic Faculty  
Search Committee**

c/o Ms. Debbie Smith  
The Ohio State University  
Department of Chemistry  
100 West 18th Avenue  
Columbus, OH 43210

(614) 688-3390, FAX (614) 292-1685

e-mail: [search@chemistry.ohio-state.edu](mailto:search@chemistry.ohio-state.edu)

Visit our website at:

<http://www.chemistry.ohio-state.edu>

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

**TWO TENURE-TRACK BIOLOGY  
FACULTY POSITIONS  
ANIMAL PHYSIOLOGY AND PLANT CELL  
BIOLOGY/PHYSIOLOGY**

Truman State University invites applications for two tenure-track positions, at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level, starting August 1998. Teaching and research are mutually supportive activities at Truman; candidates should be strongly committed both to teaching and to developing active research programs involving undergraduate and M.S. students. Research laboratory and start-up funds will be provided. In addition to the responsibilities listed below, both positions include participation in introductory biology courses.

**ANIMAL PHYSIOLOGIST** to teach a junior-level physiology course as well as an upper-level physiology course in the candidate's area of expertise. We are especially, but not exclusively, interested in candidates with research interests in electrophysiology. Search Chair: **Dr. Michael G. Tannenbaum**.

**PLANT CELL BIOLOGIST/PHYSIOLOGIST** to teach a sophomore-level cell biology course as well as a junior-level plant physiology course. Research background and interests should address questions in cell biology or physiology using plant systems. Search Chair: **Dr. David R. Howard**.

Truman has been ranked in Money magazine's top ten best college buys for the past five years. Truman is Missouri's only statewide, highly selective, public undergraduate liberal arts and sciences university. We are nationally recognized for our innovative assessment program and commitment to a broad-based liberal arts and sciences education. Students benefit from a university-wide 16:1 student/faculty ratio and the opportunity to work closely with faculty conducting research. For more information about the University and the Biology Program, please visit our website: <http://www.truman.edu>.

Candidates must possess a Ph.D., or have a targeted completion date by August 1998. Complete applications include a curriculum vitae, statements of teaching philosophy and research goals, all undergraduate and graduate transcripts, and three recent letters of reference. All application materials should be sent directly to the respective Search Chair at: **Division of Science, Truman State University, Kirksville, MO 63501-4221. Telephone: 816-785-4597.** We will start reviewing completed applications on October 6, 1997. *Truman is an Affirmative Action/Equal Opportunity Employer Institution committed to cultural diversity and compliance with the Americans with Disabilities Act.*



**INORGANIC CHEMISTRY  
FACULTY POSITIONS  
DEPARTMENT OF CHEMISTRY  
The Ohio State University**

The Department of Chemistry at The Ohio State University seeks to recruit two outstanding inorganic chemists to its faculty over the next two years: (1) a tenure-track **ASSISTANT PROFESSOR** to begin during the summer of 1998, and (2) an established **SENIOR-LEVEL** colleague to join our faculty during 1998 or 1999. Although exceptional individuals in all areas of inorganic chemistry will be considered, special attention will be paid to candidates with research interests in solid-state inorganic chemistry or the chemistry of inorganic materials.

Applications received before October 15, 1997, will be given full consideration. Candidates should submit a curriculum vitae, graduate and undergraduate transcripts (junior candidates only), and a statement of research and teaching interests. In addition, senior candidates should provide the search committee with the names of three references. Junior candidates should arrange for three letters of recommendation to be sent directly to the search committee.

**Chair, Inorganic Faculty Search Committee**  
c/o Ms. Kathy Veit

Department of Chemistry  
The Ohio State University  
100 West 18th Avenue  
Columbus, OH 43210

(614) 292-6504, FAX (614) 292-1685

e-mail: [veit.3@osu.edu](mailto:veit.3@osu.edu)

Visit our website at:

<http://www.chemistry.ohio-state.edu>

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

**PENN STATE, CHEMISTRY DEPARTMENT,  
FACULTY POSITION IN NEUROCHEMISTRY.**

A tenure-track faculty position is available starting fall 1998. We encourage research proposals that are in the broadly defined area of neurochemistry. The successful applicant should feel comfortable in a Department of Chemistry interfacing with Departments of Biology, Biochemistry, and Molecular Biology and will be expected to be an active member in the intercollegiate Neuroscience Program. The appointee will be expected to establish an exceptionally strong and highly visible research program that incorporates excellence in undergraduate and graduate education. A complete résumé, a synopsis of research plans, and three letters of recommendation are required. Review of applications will begin October 1, 1997, and continue until the position is filled. Send information to: **Chairman of the Search Committee, Box N, Department of Chemistry, 152 Davey Laboratory, Penn State University, University Park, PA 16802.** *An Affirmative Action/Equal Opportunity Employer, women and minorities encouraged to apply.*

**PENN STATE, CHEMISTRY DEPARTMENT, FACULTY POSITIONS.** Several tenure-track faculty positions are available starting fall 1998. We are committed to hiring the best person irrespective of area, although our primary teaching needs are in organic chemistry. We encourage research proposals that interface with other disciplines such as biological, materials, neurochemical, and environmental sciences, as well as interests in the more traditional areas of chemistry. The appointees are expected to establish an exceptionally strong and highly visible research program that incorporates excellence in undergraduate and graduate education. A complete résumé, a synopsis of research plans, and three letters of recommendation are required. Review of applications will begin October 1, 1997, and continue until the positions are filled. Send information to: **Chairman of the Search Committee, Box C, Department of Chemistry, 152 Davey Laboratory, Penn State University, University Park, PA 16802.** *An Affirmative Action/Equal Opportunity Employer, women and minorities encouraged to apply.*



**SENIOR FACULTY POSITIONS  
DEPARTMENT OF CHEMISTRY  
The Ohio State University**

The Department of Chemistry at The Ohio State University seeks to recruit several outstanding individuals to its faculty. We wish to hire individuals at the senior level to begin summer or autumn 1998 or 1999. Although exceptional individuals in all areas of chemistry will be considered, special attention will be paid to candidates in targeted areas, particularly the fields of environmental chemistry, materials chemistry, the chemistry of life processes, and macromolecular mass spectrometry. Applications received before October 15, 1997, will be given full consideration. Candidates should submit a curriculum vitae, a statement of research and teaching interests, and names of three references to:

**Chair, Senior Faculty Search Committee**

c/o Ms. Bette Thrall  
Department of Chemistry  
The Ohio State University  
100 West 18th Avenue  
Columbus, OH 43210

(614) 292-2251 FAX (614) 292-1685

e-mail: [bthrall@chemistry.ohio-state.edu](mailto:bthrall@chemistry.ohio-state.edu)

Visit our website at:

<http://www.chemistry.ohio-state.edu>

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

**FACULTY POSITION** in Microbiology. The Department of Microbiology at the University of Colorado Health Sciences Center in Denver, Colorado, invites applications for a tenure-track position as **ASSISTANT** or **ASSOCIATE PROFESSOR** available July 1, 1998. Academic environment, research facilities, and start-up support are excellent. Major responsibilities include development of an independent, externally funded research program on the molecular basis for pathogenesis of bacterial, viral, or other microbial infections and teaching of medical, dental, and graduate students. Faculty rank and salary are commensurate with training and experience. Minimal requirements include a doctoral degree (Ph.D., M.D., or equivalent) in microbiology or a related field and two years of relevant postdoctoral experience. Candidates for Associate Professor must demonstrate established research productivity and funding. Submit curriculum vitae, description of research interests, summary of active and pending research grants, and reprints of two or three major publications, and arrange for three professional references to send confidential letters to: **Faculty Search Committee Chair, Department of Microbiology, Campus Box B-175, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262.** Review of applications will begin immediately and continue until an appointment is made or the search is terminated. *The University of Colorado Health Sciences Center is committed to Equal Opportunity and Affirmative Action.*

**FACULTY POSITION (OPEN RANK).** The Department of Radiology of The University of Iowa College of Medicine is seeking an established investigator with current NIH or equivalent support for research in the biomedical imaging sciences. A Ph.D. or equivalent degree in biomedical sciences or engineering is required. A demonstrated ability to attract and maintain peer-reviewed grant support is also required. A record of publications in scholarly journals, national and international presentations, and other evidence of broad recognition of scholarship is desirable. This is a tenure-track faculty appointment with rank open dependent upon qualifications. Salary is commensurate with experience. Women and members of minority groups are encouraged to apply. Applicants should send a curriculum vitae to: **Michael W. Vannier, M.D., Professor and Head, Department of Radiology, The University of Iowa, 200 Hawkins Drive, Iowa City, IA 52242.** *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*



**WANTED**  
**NEUROSCIENTISTS, BEHAVIORAL SCIENTISTS, EPIDEMIOLOGISTS,**  
**PHYSIOLOGISTS, BIOPHYSICISTS, CHEMISTS, BIOCHEMISTS,**  
**CANCER RESEARCHERS, CLINICIANS, BIOENGINEERS**

***TO BUILD ON 50 YEARS OF PRIDE IN PEER REVIEW***

The Division of Research Grants of the National Institutes of Health is undergoing an expansion and has immediate openings for Scientific Review Administrators (SRAs) to manage the NIH peer review process, which is the foundation of NIH's successful support of high quality biomedical research.

We are seeking several highly motivated, enthusiastic individuals with strong scientific backgrounds; excellent judgment; and highly developed communication, analytic, interpersonal, organizational, and writing skills.

You will be responsible for understanding the current status and identifying future directions of your area of biomedical research; selecting members of review panels; managing study section meetings; and facilitating interactions with members and communicating the results of their deliberations and recommendations to the applicants and to the staff of the NIH funding components.

You will be richly rewarded knowing you have played a key role in moving a field of research forward.

These are GS-12, 13, or 14 Civil Service Positions, *requiring US citizenship*. The current salary range for these positions is \$45,939 to \$83,922 per year. Applicants must have earned the Ph.D. or M.D. (or have equivalent training and experience); postdoctoral research training; and a record of research accomplishment. Recruitment bonuses may be available. For positions requiring an M.D., a physician's comparability allowance is available.

Please submit a curriculum vitae and the names of three references by October 10, 1997, to:

**Ellie Ehrenfeld, Ph.D.**  
**Director, Division of Research Grants**  
**National Institutes of Health**  
**6701 Rockledge Drive MSC 7776**  
**Bethesda, MD 20892-7776**  
**E-mail: SCIREV@DRG.NIH.GOV**

*Selection for this position will be based on merit, with no discrimination for non-merit reasons, such as race, color, sex, national origin, marital status, handicap, age, sexual orientation, or membership/non-membership in an employee organization.*

## **AgrEvo USA Company**

Leading American Agriculture into the Twenty-First Century.

As a result of rapid expansion, AgrEvo USA Company, a leader in crop production, plant protection and environmental health both in North America and the world, has an excellent opportunity for:

### **Regulatory Specialist, Biotechnology.**

Coordinate submissions of transgenic plants and biologicals for US Government (USDA, EPA, FDA) and occasional outside US clearances. Participate within North America Biotech Regional Team to achieve global clearances as required by business plans.

Responsibilities include completing regulatory submissions in correct government approved format; responding to questions from government agencies; assisting in data development; assisting in preparation of written materials regarding the communication of biotech safety info to the public and establishing and maintaining positive working relationships with key government regulators to ensure timely acceptance, review and processing of submissions.

Position will report to Regulatory Manager, Biotechnology, AgrEvo USA Company. Requirements include a minimum of a Master's degree in biological science or biochemistry with established knowledge of basic central issues in the biotech regulatory arena. Strong written/verbal communications, interpersonal and organizational skills essential.



**AgrEvo**

Submit resume to:  
**Human Resources Department**  
**AgrEvo USA Company**  
**Little Falls Centre One, 2711 Centerville Road**  
**Wilmington, DE 19808**  
**Fax: 302-892-3027**

*LI-COR, Inc.  
has produced  
automated  
systems for  
biological  
sciences for over  
26 years. Our  
Biotechnology  
Division,  
innovators in  
infrared  
fluorescence  
DNA detection  
technology,  
has several  
key openings.*

### **Applications Scientist**

You will actively participate in new product development, training, and technical support of LI-COR's DNA analysis products at our Lincoln Research Center. Requires a Ph.D. in biological sciences with post-doctoral training in genetic analysis, mutation analysis or molecular diagnostics. Must possess strong communications skills and be willing to work as a member of a multi-disciplinary team. Expertise in genotyping, sequencing and/or molecular biology is essential.

### **Field Applications Scientists** (Eastern and Midwestern Regions)

You will support the sales process through seminars, training, and technical support for LI-COR's DNA analysis products. Requires a Ph.D. in biological sciences with demonstrated experience in genotyping, sequencing or molecular biology. Must possess strong communication skills, enjoy working with customers, and have a demonstrated ability to teach and present technical information. Familiarity with computer software and instrumentation systems is desirable. This position involves a moderate amount of travel.

LI-COR offers a challenging and dynamic working environment with competitive salaries and benefits. For more information, visit our web site at [www.licor.com/biohome.htm](http://www.licor.com/biohome.htm). Please send your resume to the Human Resources Dept., LI-COR, Inc., 4421 Superior Street, Lincoln, NE 68504. EOE.

**LI-COR**  
Biotechnology Division

## POSITIONS OPEN

### PHYSIOLOGY FACULTY POSITION TEXAS A&M UNIVERSITY COLLEGE OF VETERINARY MEDICINE Department of Veterinary Physiology and Pharmacology

We are seeking to fill a tenure-track position in physiology at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level for the academic year beginning September 1, 1998. Applicants should hold either a Ph.D., D.V.M.-Ph.D., M.D.-Ph.D., or equivalent. Postdoctoral experience in either research or teaching in physiology or a closely related discipline is preferred but not required. The Department of Veterinary Physiology and Pharmacology has active and well-funded research programs in cardiovascular and reproductive physiology but outstanding candidates with expertise in other subspecialties are encouraged to apply. We are committed to providing superior teaching to undergraduate, graduate, and professional students, and the successful candidate must show proof or promise of being an outstanding educator. Excellent opportunities exist at Texas A&M for collaboration within the College of Veterinary Medicine as well as with the nearby Colleges of Medicine, Agriculture, and Engineering. We offer highly competitive salaries and start-up funding. Please send curriculum vitae, statement of research interests and plans, statement of teaching experience and philosophy, selected reprints, and the names of four referees to:

Jeremy S. Wasser, Ph.D.  
Chairperson, Physiology Search Committee  
Department of Veterinary Physiology  
and Pharmacology  
College of Veterinary Medicine  
Texas A&M University  
College Station, TX 77843-4466  
E-mail: jwasser@cvm.tamu.edu.

Screening of the applicants will begin on October 15, 1997, and continue until the position is filled. *Texas A&M University is an Equal Opportunity Employer.*

### FACULTY POSITIONS IN DEVELOPMENTAL BIOLOGY HERMAN B. WELLS CENTER FOR PEDIATRIC RESEARCH Indiana University School of Medicine

Applications are now being accepted for four new tenure-track faculty positions at the rank of **ASSISTANT** or **ASSOCIATE PROFESSOR** for a new research group in developmental biology. Areas of interest include developmental neurobiology, genetics, gene regulation, cell-cell interactions, and signal transduction pathways. Applicants must possess a Ph.D. and/or M.D. degree, and have a record of research productivity and grant support. Successful candidates will have academic appointments in Pediatrics and in a basic science department of the Medical School, and are expected to establish a strong, externally funded research program and contribute to graduate and medical education. Positions come with generous start-up packages. This recruitment represents an expansion of the Wells Center, a highly interactive and multidisciplinary research center. Active programs currently include hematopoiesis and myeloid gene regulation, gene therapy, DNA repair, and fetal and neonatal metabolic physiology. Transgenic and gene targeting facilities and a mass spectrometry core facility are available on site.

Applicants should submit a curriculum vitae, summary of research accomplishments and future research plans, and the names of at least three references by November 15, 1997, to:

Dr. Mary Dinaiur  
Chair, Search Committee  
Wells Center for Pediatric Research/Riley Hospital  
for Children  
702 Barnhill Drive, Room 2720  
Indianapolis, IN 46202  
E-mail: mary\_dinaiur@iucc.iupui.edu

*Indiana University is an Equal Opportunity/Affirmative Action Educator, Employer, and contractor.*

Position available immediately. **RESEARCH INSTRUCTOR.** Requirements: Special interest in sickle cell anemia, acquired clotting disorders, and teaching. Four years of basic laboratory research experience, proficient in erythrocyte flux studies and non-isotope labeling of erythrocytes. Experience also required in immunohistochemistry, ELISA techniques, autoradiography, flow cytometry, and fluorescent microscopy. Please send inquiries to: The University of Cincinnati, P.O. Box 670508, Cincinnati, OH 45267-0508.

## POSITIONS OPEN

### CHAIR, DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

The University of North Dakota School of Medicine and Health Sciences invites applications and nominations for the position of Chair of the Department of Pharmacology and Toxicology. We seek an outstanding medical scientist with a strong research record, including extramural support, in molecular approaches to the study of pharmacology and toxicology, who will complement, expand, and strengthen existing areas of research in the Department. The candidate will be expected to participate in medical and allied health education and therefore must be committed to excellence in teaching. The applicant should also possess interpersonal and leadership skills in mentoring faculty, directing students, and performing administrative duties.

The Chair will oversee a department whose active research interests include molecular and transgenic approaches to the investigation of diabetes, cancer, heart disease, signal transduction, receptors, and ion channels. The department offers M.S., Ph.D., and M.D.-Ph.D. degrees, instructs second-year medical students, and provides undergraduate service courses to nursing students and other allied health and nonmajors. Further information is available at website: <http://www.und.nodak.edu/depts/pharmtox/home.htm>.

Review of applications will begin October 1, 1997, and the search will remain open until the position is filled. Applicants should submit a detailed curriculum vitae, a statement that addresses administrative philosophy, research goals, and teaching interests, and the names and addresses of three references to: Dr. Edward C. Carlson, Professor and Chair of the Department of Anatomy and Cell Biology, and Chair of the Search Committee, c/o Office of the Dean, School of Medicine and Health Sciences, University of North Dakota, Box 9037, Grand Forks, ND 58202-9037.

*The University of North Dakota is an Equal Opportunity/Affirmative Action Institution.*

### FACULTY POSITION BIOCHEMISTRY AND MOLECULAR BIOLOGY

University of California Los Angeles (UCLA)

The Department of Chemistry and Biochemistry invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level in biochemistry. We are seeking a candidate who will establish a vigorous and innovative research program in enzymology, catalysis, metabolism, or signal transduction. Exceptional applicants in other areas of biochemistry will be also considered. Applications should include a curriculum vitae, a statement of research accomplishments and future research plans, and two to three reprints of representative publications. Applicants should also arrange for three letters of recommendation to be mailed to the address below. To assure consideration, all application materials and letters should be received by October 31, 1997. Submit to:

Professor James Gober  
Biochemistry Search Committee  
Department of Chemistry and Biochemistry  
University of California  
Los Angeles, CA 90095-1569

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

### NEUROSCIENCE FACULTY POSITION AT FLORIDA STATE UNIVERSITY

The Florida State University Department of Biological Science, Program in Neuroscience is seeking a **NEUROSCIENTIST** working at the molecular level for a nine-month, tenure-track, **ASSISTANT PROFESSOR** position. Research area within neuroscience is open, but the Program is committed to building on existing strengths in the peripheral and central processing of sensory input, including neurophysiological-neurochemical aspects, neuroendocrinological responses, and developmental and regenerative neuroplasticity. Candidates must demonstrate a strong commitment to undergraduate and graduate teaching and the potential for development of a high quality, funded, independent research program in neuroscience. By November 1, interested candidates should forward a curriculum vitae, list of publications, names of three references, and a statement of research goals to: Dr. Marc E. Freeman, Department of Biological Science, Florida State University, Tallahassee, FL 32306-4340. *Florida State University is an Affirmative Action/Equal Access/Equal Opportunity Employer.*

## POSITIONS OPEN

### TWO FACULTY POSITIONS VIROLOGY AND MICROBIAL PATHOGENESIS

Department of Microbiology and Immunology  
University of Rochester  
School of Medicine and Dentistry

The Department of Microbiology and Immunology of the University of Rochester invites applications for two tenure-track positions at the **ASSISTANT PROFESSOR** level. Applicants should have a Ph.D. and at least three years of postdoctoral experience. We are seeking (1) individuals with expertise in microbial pathogenesis (applicants with an interest in host-pathogen interactions, opportunistic infections, or emerging infectious disease are encouraged) and (2) a virologist (applicants with interest in human tumor viruses, vaccine biology, and/or viral immunology are encouraged). Successful candidates are expected to develop an externally-funded research program as well as participate in graduate and medical student teaching. The University of Rochester has embarked on major new research initiatives in the areas of vaccine biology and immunology, cancer biology, and aging and development. This will entail the hiring of 50 new faculty and construction of a new research facility. Please send curriculum vitae, statement of research interest, and names of three references to: Virology and Microbial Pathogenesis Search Committee, Department of Microbiology and Immunology, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, Box 672, Rochester, NY 14642. *The University of Rochester is an Equal Opportunity Affirmative Action Employer.* For additional information concerning the Department visit our website: <http://www.urmc.rochester.edu/smd/mbi/>.

### FACULTY POSITION DRUG ABUSE RESEARCH

Applications are invited for a non-tenure-track faculty position in the Department of Psychiatry and Human Behavior at the University of Mississippi Medical Center. The position will be at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level, depending upon qualifications. Candidates should have a Ph.D. in pharmacology, psychology, or neuroscience and expertise in drug abuse research using non-human subjects. Preference will be given to individuals with expertise using non-human primates. The successful candidate will be expected to develop an externally-funded research program and to establish collaborative relations with other scientists within the department. Salary will be commensurate with rank. Applicants should send curriculum vitae, a statement of current and future research goals, and names of three references to:

William L. Woolverton, Ph.D.  
Chair of Search Committee  
Department of Psychiatry and Human Behavior  
The University of Mississippi Medical Center  
2500 North State Street  
Jackson, MS 39216.

Applications will be accepted until the position is filled. *Equal Opportunity Employer. Minorities/Females/Disabled/Veterans.*

### MOLECULAR VIROLOGY

The Division of Molecular Virology at Baylor College of Medicine invites applications for a tenure or tenure-track faculty position. Rank is open. An innovative scientist is sought, and an established research program is desirable. Of particular interest are research topics involving viral pathogenesis, viral immunology, virus-host interactions, and molecular biology of viral replication. Outstanding applicants in other areas of virology also will be considered. Applicants should have postdoctoral experience in virology, and demonstrated research productivity. The successful applicant is expected to pursue an independent research program and to participate in graduate training. Current faculty research activities focus on viral replication, gene expression, pathogenesis, oncogenes, and disease prevention. This is an excellent opportunity to join a strong academic department with newly renovated laboratories in the active Texas Medical Center. Send curriculum vitae, names and addresses of at least three references, statement of current research activities, and description of future plans by November 1, 1997, to: Dr. Mary Estes, Faculty Recruitment Committee, Division of Molecular Virology, Baylor College of Medicine, Houston, TX 77030. *An Equal Opportunity/Affirmative Action Employer.*



## NATIONAL INSTITUTES OF HEALTH

### Undergraduate Scholarship Program (UGSP)

Qualified undergraduates can train and be mentored at the cutting edge of biomedical research while receiving scholarship support.

The UGSP is sponsored by the National Institutes of Health (NIH), the Federal Government's lead biomedical research and research training agency. NIH offers scholarships to qualified individuals who are committed to a career in biomedical research.

Scholarships up to \$20,000 per year support tuition, educational, and qualified living expenses (room, board, transportation) while students pursue an undergraduate degree.

During each year of the award, scholars serve for 10 weeks (with salary/benefits) as employees in NIH research laboratories. They are assigned mentors, participate in seminars and programs available to all NIH researchers, and are provided with housing and transportation. After graduation, they serve 1 year of full-time employment at NIH for each year of scholarship support.

#### Interested students should apply if they:

- Are committed to a career in biomedical research;
- Are from a disadvantaged background;
- Have a GPA of 3.5 or are in the top 5 percent of their class;
- Are a U.S. citizen, national, or permanent resident;
- Are enrolled or accepted for enrollment as a full-time student at a qualified accredited institution.

**This is a special opportunity for special students.**

#### For more information, contact

NIH/OD/OIR/OLRS  
UGSP  
7550 Wisconsin Avenue, Room 604  
Bethesda, MD 20892-9121

Phone: 800-528-7689  
Fax: 301-402-8098  
e-mail: [ugsp@nih.gov](mailto:ugsp@nih.gov)  
TTY: 1-888-352-3001  
<http://ugsp.info.nih.gov>



## Faculty of Medicine University of Ottawa



The Faculty of Medicine at the University of Ottawa is a bilingual institution of higher learning and research. The Faculty is now recruiting a number of outstanding investigators to tenure-track faculty positions. The successful applicants will significantly enhance the academic and research capability and contribute importantly to the status and reputation of the Faculty of Medicine. Applicants are expected to have completed at least 2 years of postdoctoral research training, and will have given evidence of scientific originality, superior productivity, and potential as independent investigators. Successful applicants will be appointed at the appropriate academic rank in the Faculty of Medicine and will be expected to develop their independent research activities and contribute to the teaching programs of the Faculty. Recruitment is now directed to the following thematic areas:

#### Growth and Development

The group comprises 15 independent investigators involved in the study of growth and development. Applicants will have established a publication record in *in vivo* functional analysis of genes involved in development, or cell and molecular biology of embryogenesis and organogenesis. Applicants using simple model systems, such as *C. elegans* and *Drosophila*, for the study of development are encouraged to apply.

#### Neurotransmission

The group comprises 8 independent investigators with expertise focusing on molecular and cellular mechanisms in the regulation of neurotransmission. The group is seeking additional investigators interested in mechanisms involving transmitter transport, release, response, and modulation. There is particular interest in the recruitment of investigators with expertise in molecular and patch-clamp electrophysiological approaches.

#### Receptor Biology

The group, which comprises 15 independent investigators with expertise in molecular recognition and molecular, cellular, and whole animal responses to ligand-receptor interactions, seeks applicants with a focus on hormones/growth factors/cytokines and signaling mechanisms in the control of gene expression and cell function. There is particular interest in the recruitment of applicants using knockout/transgenic and molecular genetic approaches.

The recruitment effort is directed at MDs and/or PhDs with special emphasis on individuals whose research interests in one or more of the areas listed above are complementary to areas of existing strength and who offer the clear potential for collaborative research. In accordance with Canadian immigration requirements, this advertisement is directed primarily, but not solely, to Canadian citizens and permanent residents. Bilingualism (English and French) is a definite asset. Applications, including a CV and a statement of research goals/interests, and the names of three references should be sent to **Dr. P. Walker, Dean, Faculty of Medicine, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, CANADA K1H 8M5 by October 31, 1997.**

*The University of Ottawa is an equal opportunity employer and encourages applications from all qualified applicants. Women, aboriginal peoples, members of visible minorities, and persons with disabilities are encouraged to apply.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR VEGETABLE AND FRUIT CROP PATHOLOGY

Plant pathology position with emphasis on applied, problem-solving extension and outreach education, and complementary research. This is a nine-month, tenure-track position with opportunity for summer appointment. Responsibilities will be allocated as 75 percent extension and 25 percent research in the Department of Crop Sciences. The successful applicant is expected to develop nationally recognized extension education and extramurally funded research programs directed at the integrated management of important diseases of vegetable and fruit crops. The incumbent is expected to identify extension education needs in the area of vegetable and fruit crop disease management, develop and deliver creative and effective programs to address these needs, and direct an applied research program that provides a research basis for efficient and effective disease management strategies. The incumbent will participate in the teaching programs of the department primarily through direction of graduate students. The incumbent's extension and research programs will serve a diverse clientele, focusing on commercial growers and supporting extension programs directed towards non-commercial gardeners. A Ph.D. in plant pathology or a related area is required. The candidate must possess excellent interpersonal and communication skills; demonstrate a clear ability and desire to develop and deliver excellent extension education programs; and demonstrate an ability to conduct and report independent research. Salary commensurate with training and experience. Starting date: May 21, 1998, or when a suitable candidate is available. For full consideration, applications will be accepted until November 15, 1997. Interested persons should assemble an application packet consisting of an introductory cover letter, a curriculum vitae, and a statement of career goals in extension and research. The packet should be sent to: **Professor G. H. Heichel, Head, Department of Crop Sciences, University of Illinois at Urbana-Champaign, 1102 South Goodwin Avenue, Urbana, IL 61801. Telephone: 217-333-9480.** Applicants must also arrange to have a full set of certified university transcripts and three letters of reference sent to the same address, all to arrive on or before the closing date. For additional information contact: **Professor J. K. Pataky, Department of Crop Sciences, University of Illinois at Urbana-Champaign, 1102 South Goodwin Avenue, Urbana, IL 61801. Telephone: 217-333-6606; e-mail: j-pataky@uiuc.edu.**

*The University of Illinois is an Affirmative Action/Equal Opportunity Employer. Please cite announcement number 08/97A-5698 when applying.*

### BIOLOGY FACULTY POSITIONS AT GEORGIA STATE UNIVERSITY

The Department of Biology at Georgia State University invites applications for anticipated tenure-track positions in neuroendocrinology, cell biology/physiology, and microbial pathogenesis. Applicants at the **ASSISTANT PROFESSOR** level will be expected to establish independent, vigorous, externally-funded research programs. Applicants at more senior levels should have well-established, externally funded research programs. We are particularly interested in individuals whose research complements existing research strengths and who employs molecular and cellular approaches. Successful candidates will participate in instruction at the undergraduate and graduate M.S./Ph.D. levels. The Department has excellent core research facilities. Applications including curriculum vitae, reprints, statement of research plans, and three letters of recommendation should be sent by November 1, 1997, to: **Chair of Search Committee, Department of Biology, P.O. Box 4010, Georgia State University, Atlanta, GA 30302-4010.** Georgia State University, a unit of the University System of Georgia, is an Equal Employment Opportunity/Affirmative Action Employer.

#### BIOLOGY

The Department of Biology at Northeastern State University invites applicants for an **ASSISTANT PROFESSOR, CELLULAR BIOLOGIST** to teach cell biology, genetics, microbiology, and senior seminar. Individual will be based in Tulsa at UCT/Rogers University but will teach one course each semester at Tahlequah. Position will join ten-member Biology Department mostly housed at main campus. Ph.D. required. Send application, curriculum vitae, unofficial transcripts, and three letters of recommendation to: **Personnel Office (EOMB), Northeastern State University, Tahlequah, Oklahoma, 74464.** Applications should be received by October 15, 1997. An Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

### Bates College

#### DEPARTMENT OF BIOLOGY

The Department of Biology at Bates College, a selective liberal arts college of 1,600 students, has a **TENURE-TRACK ASSISTANT PROFESSOR** position open for an **ENVIRONMENTAL TOXICOLOGIST** beginning in September of 1998.

Our toxicologist will become the ninth full-time faculty member in biology. S/he will participate in the department's core curriculum, and teach introductory environmental toxicology and additional courses in her/his area of expertise. Candidates whose approach to environmental toxicology includes competence in public health, epidemiology, embryology, and/or teratology will be given preference. In addition, she or he will be expected to conduct an active research program involving Bates undergraduates. The department seeks applications from candidates whose research interests involve the health effects of environmental toxins at the tissue or whole organism level of biological organization. A Ph.D. is required and postdoctoral training is desirable.

Bates College is located in southern Maine, two and a half hours from Boston, in the city of Lewiston, known for its Franco-American cultural influence and proximity to scenic mountains and beautiful coastline. Since its founding in 1855, the college has been coeducational and enrolled students of various religious and racial/ethnic groups. It has maintained a tradition of inclusiveness in college social activities without sororities or fraternities. The institution has an accomplished faculty from a wide range of disciplines teaching bright and enthusiastic students. In the last decade five new interdisciplinary programs have been instituted at Bates. The college views research as a method of teaching and financially supports student/faculty research collaboration. Additional institutional information is available online at website: <http://www.bates.edu>.

Applicants should provide a cover letter, curriculum vitae, a statement of teaching experience and philosophy, a statement of research interests, undergraduates and graduate transcripts, and three letters of recommendation by September 24, 1997, to:

**Toxicology Search Committee  
Department of Biology  
c/o Secretarial Services  
Bates College  
2 Andrews Road, #7 Lane Hall  
Lewiston, ME 04240**

*Bates College values a diverse college community and seeks to assure Equal Opportunity through a continuing and effective Affirmative Action Program.*

#### RESEARCH SCIENTIST ASSOCIATE OR FULL PROFESSOR (RESEARCH)

The Neurosurgery Foundation, a faculty practice plan affiliated with Rhode Island Hospital, is seeking to recruit a Research Scientist with substantial experience in conducting laboratory research in molecular and cellular biology. Experience and expertise in one or more of the following areas is desired: 1) cellular growth and survival; 2) brain tumor biology. A current NIH grant and a demonstrated research track record as a P.I. is required. The incumbent is also expected to participate as a preceptor of students, residents, and postdoctorates in Research at the Rhode Island Hospital.

The successful candidate must qualify for appointment as Associate or Full Professor (Research), Department of Clinical Neurosciences, Brown University School of Medicine.

Applications must be received by November 14, 1997. Please send a curriculum vitae to: **Mel H. Epstein, M.D., Chairman, Search Committee, Department of Clinical Neurosciences, Rhode Island Hospital-MOC, 2 Dudley Street, Suite 505, Providence, RI 02905.**

*Rhode Island Hospital is an Equal Opportunity Affirmative Action employer and encourages applications from protected and minority groups.*

## POSITIONS OPEN

### CELL/MOLECULAR BIOLOGIST ASSISTANT PROFESSOR

The Department of Biology at the State University of West Georgia seeks applicants for a tenure-track, Assistant Professorship in biology with a focus on cell and molecular biology. Candidates are expected to have a Ph.D. (or equivalent degree) and postdoctoral experience. The successful candidate will be expected to teach in an integrated cell/molecular biology one-year sequence for biology majors, to assist with teaching of the first-year sequence for majors or nonmajors, and to teach one or more courses in her/his area of specialization. The candidate selected for this position is expected to establish a research program in her/his discipline which will involve undergraduate and graduate students, and to participate in professional activities of the University of her/his scientific discipline.

The appointments are available August, 1998. Competitive salary is offered and is commensurate with experience. The State University of West Georgia is a campus of the State University System. The campus is located in Carrollton, Georgia, a community of approximately 20,000 persons, located 45 miles west of Atlanta. The State University of West Georgia services a student population that is approaching 9,000 with approximately 31% of the student population in graduate studies. The Department of Biology is designated a program of excellence at UWG. The 12 faculty are all research-active and currently service approximately 350 undergraduate and 25 graduate majors.

Applicants should submit letters of interest, a current curriculum vitae, statements of teaching and research interests, and three letters of recommendation to: **Dr. David Osborne, Chair, Cell and Molecular Biology Search Committee, Department of Biology, State University of West Georgia, Carrollton, GA 30118.** All application files should be complete by September 25, 1997. Please direct questions or inquiries to Dr. Osborne at **Telephone: 770-836-4545; e-mail: dosborne@westga.edu.** *The State University of West Georgia is an Affirmative Action, Equal Opportunity Employer, and strongly encourages the applications of women and minorities. Georgia is an open records state.*

#### THREE POSITIONS IN ECOLOGY

**UNIVERSITY OF ALBERTA.** The Department of Biological Sciences in the Faculty of Science invites applications for three tenure-track positions at the level of **ASSISTANT PROFESSOR** to add to our existing strengths in ecology. We seek applicants specializing in the three following areas: plant community ecology or landscape ecology; behavioral ecology; and wildlife biology. The effective date of employment will be July 1, 1998. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. If suitable Canadian citizens and permanent residents cannot be found, other individuals will be considered. Candidates must have a Ph.D. and they should forward a curriculum vitae, list of publications, reprints of their three most significant publications, a brief statement of research and teaching interests, and the names of three referees to: **Dr. S. E. Jensen, Chair, Department of Biological Sciences, CW 405 Biological Sciences Building, University of Alberta, Edmonton, Alberta, Canada T6G 2E9. E-mail: susan.jensen@ualberta.ca.** For additional information about the Department see website: <http://www.biology.ualberta.ca/>. Closing Date: October 31, 1997.

*The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.*

**PHYSIOLOGIST.** Tenure-track position in the Department of Exercise Science, University of Iowa. The position is expected to be at the **ASSISTANT PROFESSOR** level; exceptional candidates may be considered at the **ASSOCIATE PROFESSOR** level. A Ph.D. and the potential to attract research funding required. Postdoctoral training, teaching experience, and a background in exercise physiology are highly desirable. Duties will include establishing an independent research program and teaching in the areas of exercise and human physiology. Review of applications will begin in October 1997. Submit a curriculum vitae, representative publications, a five-year research plan, teaching interests, and three letters of references to: **Dr. Kevin Kregel, Department of Exercise Science, 516 FH, University of Iowa, Iowa City, IA 52242.** *Minorities and women are encouraged to apply. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*



# CLONTECH

NOW YOU CAN.

CLONTECH Laboratories, Inc., a dynamic, privately held company, manufactures innovative products for life science research. Our mission is to be a global leader in high-quality innovative products for the life science market. Our expertise in PCR and PCR-based technology, two-hybrid analysis, nucleic acid chemistry, gene expression, reporter systems and other molecular biology applications enables us to be a leader in cutting-edge technologies.

We place emphasis on the development of our employees to meet the challenges of our industry. We have created an infrastructure that emphasizes quality, innovation, fiscal stability, and moral responsibility. We believe that our employees and our customers are our most valuable assets and, therefore, strive to encourage long-term relationships that foster cooperation and involvement. We are looking for individuals to contribute in the following positions:

## TECHNICAL SUPPORT SPECIALISTS

This position will require technical expertise, product knowledge, organizational and communication skills to facilitate answering customers' inquiries. Record, organize and disseminate customer information and relevant feedback to other staff members, update and edit product documentation, attend TQM meetings, provide input on assigned product lines, and attend product training. Requires BS/MS/PhD in Molecular Biology, Biochemistry or related field with the ability to effectively communicate with scientific personnel.

(SC9750)

## RESEARCH SCIENTIST I/II

This position will be responsible for developing new products and applications for purification of Nucleic Acids and Proteins. Requires PhD with 5+ years research work in molecular biology, biochemistry, or related field, with a strong publication record, initiative and creativity to develop new products for the company. Some industrial experience preferred.

(SC9747)

## TECHNICAL WRITER

In this position working with other internal staff, you will write copy and provide editorial support for our main catalog and other marketing materials. You will also act as primary review coordinator for slides, posters and other projects. Requires a BS/MS/PhD in life science with excellent written and verbal communication skills and the ability to handle multiple projects under tight deadlines. Familiarity with desktop publishing a plus.

(SC9758)

If you would like to work among a select group of talented individuals in the biotech industry where innovation is the key to success, please send your resume indicating position and job code to:

**CLONTECH Laboratories Inc.**, 1020 East Meadow Circle, Palo Alto, CA 94303-4230,  
Attn: Human Resources. FAX: (650) 354-0775.  
Email: [hr@clontech.com](mailto:hr@clontech.com)

Visit us at [www.clontech.com](http://www.clontech.com)

EOE/AA/M/F

# DRUG DISCOVERY RESEARCH

## Research at its best and most exciting...

The R.W. Johnson Pharmaceutical Research Institute (RWJPRI) uses the most advanced methodologies and leading edge screening technologies to conduct a wide range of R&D activities in support of Johnson & Johnson's pharmaceutical business areas, including anti-infectives, central nervous system, dermatology, hematology/oncology, immunology/inflammation and women's health. To keep us at the forefront of research and development, we are now seeking two skilled researchers with strong publication records, excellent communication skills and postdoctoral experience to join us in Raritan, NJ (Central New Jersey).

In these key positions, you will become part of an interdisciplinary team composed of biologists and chemists. We'll look to you to propose drug discovery targets and generate reagents; identify, develop and validate receptor and enzyme based assay systems suitable for high throughput screens; and evaluate small molecule drug candidates. Additional responsibilities involve the supervision and training of associate staff in the techniques and procedures necessary to achieve team goals.

## SCIENTIST/SR. SCIENTIST (PHARMACOLOGY)

You will actively support current research interests in reproductive therapeutics. To qualify, you'll need a Ph.D. in Reproductive Physiology, Molecular Pharmacology or a related discipline, plus 2-3 years postdoctoral training and knowledge of molecular biology techniques, including protein expression. Previous experience in high throughput screening, bone physiology, or neurobiology, along with animal modeling, is desired. **Dept 1541**

## SCIENTIST/SR. SCIENTIST (BIOLOGY)

You will contribute to a team with research interests in growth factors/cytokine receptor biology and signal transduction pathways, cancer/angiogenesis and diabetes/obesity. Requirements include a Ph.D. in Biology, Cell Biology, Pharmacology, Biochemistry or related disciplines, plus 2-5 years postdoctoral training. Experience with recombinant DNA techniques, protein expression and *in-vitro* bioassays, is required. Knowledge of enzymology and signal transduction pathways is preferred, as is hands-on experience with animal models. **Dept 1542**

Long considered one of the nation's most progressive employers, Johnson & Johnson is a \$21-billion company committed to building a forward-thinking, "family-friendly" environment which inspires dedication and fosters innovation. We provide competitive salaries and comprehensive benefits including medical/dental insurance, 401(k) plan and our LIVE FOR LIFE Wellness Program with on-site fitness centers. To apply, please forward a scannable copy of your resume to: Dept. number from above for position of interest, Johnson & Johnson Recruiting, P.O. Box 16597, New Brunswick, NJ 08906-6597. We are an equal opportunity employer and support diversity in the workplace.

For more information or to submit your resume electronically, visit our website at [www.jnj.com](http://www.jnj.com)



**THE R.W. JOHNSON  
PHARMACEUTICAL RESEARCH INSTITUTE**

a *Johnson & Johnson* company

A Recipient of the 1996 National Medal of Technology  
and one of America's Most Admired Companies

## POSITIONS OPEN

### THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER ASSISTANT/ASSOCIATE/PROFESSOR CHEMICAL BIOLOGY

The Department of Biochemistry at the University of Texas Southwestern Medical Center, in continuation of its research initiative in chemistry at the interface with biology and medicine, invites applications for 12-month, tenure-track positions at the Assistant/Associate/Professor level. Candidates should hold a Ph.D. degree in chemistry with demonstrated productivity in organic synthesis and/or natural products chemistry. The selected individual will be expected to develop a vigorous program of independent research at the frontiers of chemistry. U.T. Southwestern has state-of-the-art facilities and an outstanding faculty, including four Nobel Laureates and eleven members of the National Academy of Sciences. The Biochemistry Department offers a vibrant environment for interdisciplinary research, generous start-up support, and participation in graduate-level teaching. For more information, visit the Chemical Biology Training Program website: <http://biochemweb.swmed.edu/training> or the UT Southwestern website: <http://www.swmed.edu>. Applicants should submit a curriculum vitae, description of research interests, and the names of three references by October 31, 1997, to:

J. R. Falck, Ph.D.  
Robert A. Welch Professor in Chemistry  
Department of Biochemistry  
U.T. Southwestern  
5323 Harry Hines Boulevard  
Dallas, TX 75235-9038

The University of Texas Southwestern Medical Center is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.

### TWO POSITIONS IN SYSTEMATICS/ EVOLUTIONARY BIOLOGY

**UNIVERSITY OF ALBERTA.** The Department of Biological Sciences in the Faculty of Science invites applications for two tenure-track positions at the level of **ASSISTANT PROFESSOR** to build upon our international reputation in systematics/evolution. We seek applicants specializing in insects/invertebrates or vascular plants. The effective date of employment will be July 1, 1998. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. If suitable Canadian citizens and permanent residents cannot be found, other individuals will be considered. Candidates must have a Ph.D. and they should forward a curriculum vitae, list of publications, reprints of their three most significant publications, a brief statement of research and teaching interests, and the names of three referees to: Dr. S. E. Jensen, Chair, Department of Biological Sciences, CW 405 Biological Sciences Building, University of Alberta, Edmonton, Alberta, Canada T6G 2E9. E-mail: [susan.jensen@ualberta.ca](mailto:susan.jensen@ualberta.ca). For additional information about the Department see website: <http://www.biology.ualberta.ca/>. Closing Date: October 15, 1997. The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

### ASSISTANT/ASSOCIATE PROFESSOR OF BIOPHYSICS

The Department of Biochemistry and Biophysics invites applications for a full-time, tenure-track (nine-month) faculty appointment. We are seeking outstanding candidates with demonstrated research accomplishments in using single crystal X-ray diffraction methods to study macromolecular structure and function, and who will pursue excellence in teaching biophysics and biochemistry. The appointee is expected to develop an active extramurally supported research program that complements, but does not duplicate, the present research in the department. To apply, forward a letter of interest, curriculum vitae, a concise statement of research plans, copies of two representative publications, and have three reference letters sent to: P. Shing Ho, Department of Biochemistry and Biophysics, ALSB 2011, Oregon State University, Corvallis, OR 97331-7305. Completed applications received by October 1, 1997, will be given full consideration. (information on the department can be found at website: <http://www.orst.edu/dept/biochem/>). Oregon State University is an Affirmative Action/Equal Opportunity Employer, and has a policy of being responsive to dual-career couples.

## POSITIONS OPEN



### ARIZONA STATE UNIVERSITY ASSISTANT/ASSOCIATE PROFESSOR

We invite applications for two positions at the tenure-track Assistant or tenured Associate Professor level in the Department of Biology, beginning fall 1998.

**EVOLUTIONARY BIOLOGIST:** Candidates must have primary research interest in the processes of evolution of animals, plants, and/or microorganisms.

**ENVIRONMENTAL OR EVOLUTIONARY PHYSIOLOGIST:** Research and/or teaching must address fundamental questions relevant to mechanisms of physiological function in natural environments, using animal models or taxonomically broad perspectives which incorporate animals. (Teaching will include human anatomy and physiology and/or animal physiology.)

Successful candidates will be expected to establish an active research program, participate in undergraduate and graduate teaching, and perform professional service. Ph.D. required by August 1998. Applicants must submit curriculum vitae, e-mail address, selected reprints, a statement of research accomplishments and future directions, and a statement of teaching experience, interests, and philosophy, and arrange to have three letters of recommendation sent to: Evolutionary Biology or Physiology Search Committee, Department of Biology, Arizona State University, Box 871501, Tempe, AZ 85287-1501. FAX: 602-965-2519; e-mail: [biology@asu.edu](mailto:biology@asu.edu). Applications from two individuals wishing to share either appointment will be considered. Application deadline is September 29, 1997, with applications reviewed weekly thereafter until the position is filled. Arizona State University is an Affirmative Action/Equal Opportunity Employer.

### NUTRITIONAL BIOCHEMIST UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The Department of Nutrition invites applications for a tenure-track position as **ASSISTANT** or **ASSOCIATE PROFESSOR**. The candidate's research interests should be in the general area of nutrition or metabolism at the cellular or molecular level. We particularly encourage applications from individuals who are using techniques of molecular biology to investigate nutrition-related questions in biochemistry, physiology, endocrinology, or gastroenterology.

The successful candidate is expected to maintain an independent research program, to mentor graduate students, and to contribute to excellence in nutritional biochemistry/metabolism instruction. Our website is: <http://www.sph.unc.edu/nutr/>.

Review of applications will begin on October 1, 1997. The search will remain open until the position is filled. A complete curriculum vitae, statement of research interests and goals, and three letters of reference should be sent to:

Rosalind Coleman, M.D.  
Director of Nutritional Biochemistry  
Department of Nutrition, CB# 7400  
University of North Carolina-Chapel Hill  
Chapel Hill, NC 27599-7400

The University of North Carolina is an Equal Opportunity Affirmative Action Employer.

### ANTIMICROBIAL PEPTIDES: STRUCTURE-FUNCTION STUDIES UNIVERSITY OF CALIFORNIA, IRVINE

Two positions at the **POSTDOCTORAL** or **ASSISTANT RESEARCHER** level are available in the UCI Department of Pathology for studies on mammalian antimicrobial peptides (see *Trends Cell Biol.* 5:114-119, 1995). Innovative investigators are sought to expand ongoing structure-function studies employing solid phase peptide synthesis and recombinant expression methodology. Project goals include the elucidation of peptide structural features that correlate with antimicrobial potency, selectivity, and ordered interactions with biological membranes. Candidates should have a strong background in peptide/protein chemistry as well as expertise in (i) solid phase peptide synthesis, purification, and characterization, or (ii) site-directed mutagenesis and recombinant protein expression. Send curriculum vitae, research experience and interests, and names of three references to: Dr. Michael E. Selsted, Department of Pathology, College of Medicine, University of California, Irvine, CA 92697-4800. The University of California is an Equal Opportunity Employer.

## POSITIONS OPEN

### GENE THERAPY

The University of Calgary Faculty of Medicine invites applications for a full-time academic position at the **ASSISTANT PROFESSOR** level or higher in the field of gene therapy. Duties will include the development of an independent research program, as well as teaching and graduate student supervision. The incumbent will also provide leadership in the development of gene therapy research in a collaborative multidisciplinary research environment within the Faculty.

Qualifications include a Ph.D. and/or M.D., at least three years of postdoctoral experience, and a proven record of excellence in research. If this research is patient-based and involves the provision of patient care, the selected candidate must be eligible for licensure in the Province of Alberta. Applications are encouraged from researchers employing gene delivery systems applied to disease states.

The selected applicant will be expected to compete for salary and establishment funding from the Alberta Heritage Foundation for Medical Research and/or the Medical Research Council of Canada, and will have 75 percent of time protected for research.

Please submit a curriculum vitae, a summary of research interests, and two reprints of recent publications, as well as arrange to have three letters of reference sent directly, by October 31, 1997, to:

Dr. M. J. Fritzler, Associate Dean (Research)  
Faculty of Medicine  
The University of Calgary  
3330 Hospital Drive N.W.  
Calgary, Alberta, Canada T2N 4N1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary is committed to Employment Equity.

### UNIVERSITY OF CALIFORNIA, LOS ANGELES: FACULTY POSITION IN CELLULAR OR MOLECULAR IMMUNOLOGY

The School of Medicine and College of Letters and Sciences at UCLA seek a tenure-track **ASSISTANT PROFESSOR** or tenured **ASSOCIATE PROFESSOR** engaged in exceptional cellular or molecular immunology research. This opening follows the recent merger of the Department of Microbiology and Immunology from the Medical School with the Department of Microbiology and Molecular Genetics from the College. The merged department provides a unique opportunity for productive interactions and collaborations, and for the development of innovative approaches towards the education of undergraduate, graduate, and medical students. Competitive start-up funds, generous space, and access to a large number of core facilities within the School of Medicine and College will be provided. Applicants with appropriate experience and intent should submit a curriculum vitae, a brief statement of future research plans, and three letters of recommendation to: Stephen Smale, Chairman, Immunology Search Committee, Department of Microbiology and Immunology, 6-720 MRL, UCLA, 675 Circle Drive South, Los Angeles, CA 90095-1662. All applications and recommendation letters should be received by October 31, 1997. UCLA is an Equal Opportunity Employer.

### ASSISTANT PROFESSOR BIOCHEMISTRY

Search extended: The Department of Chemistry and Biochemistry at The University of Texas at Arlington invites new applications for a tenure-track position in biochemistry at the level of Assistant Professor, with an anticipated starting date of January 15, 1998. Candidates must possess a Ph.D. in biochemistry or closely related area, and have had postdoctoral experience. A commitment to excellence in teaching at both the undergraduate and graduate levels, as well as conducting a vigorous, externally funded research program is expected. Our website: <http://www.uta.edu/cos> contains more information on the University and the Department. Applicants should submit a curriculum vitae, a description of their proposed research program, and arrange to have at least three letters of recommendation and an official transcript sent to: Search Committee (Biochemistry), Department of Chemistry and Biochemistry, University of Texas at Arlington, Arlington, TX 76019-0065. Review of applications will begin on September 29 and continue, pending budgetary approval, until the position is filled. The University of Texas at Arlington is an Equal Opportunity/Affirmative Action Employer.



Committed to  
**Diversity**

Respected for  
**Excellence**

Memorial Sloan-Kettering — ranked #1 in cancer care year after year in a study conducted by U.S. News and World Report — offers a challenging, sophisticated, results oriented work environment. Recognized worldwide, Memorial Sloan-Kettering Cancer Center's Research Programs are leading contributors to advances in cancer treatments.

*And we feel that's just the beginning.*

A key ingredient of our success is our commitment to recognizing excellence and recruiting the best candidates to join our diverse team — a team of diverse backgrounds, ideas and experiences, blending together to create a flow of ideas and energy unlike any other.

If you have the vision, dedication and skills to match our own, you may be considered for opportunities in the following areas:

**Cell Biology & Genetics • Molecular Biology  
Cellular Biochemistry & Biophysics • Immunology  
Molecular Pharmacology & Therapeutics**

We offer a competitive salary and comprehensive benefits, including 100% tuition reimbursement. To find out about where you fit in on our internationally respected research team, please forward your resume and salary requirements, to: M. Ko, Employment Dept., #97106R, MSKCC, 633 Third Avenue, 5th Floor, New York, New York 10017. E-mail [browna@mskcc.org](mailto:browna@mskcc.org). EOE/AA.



**Memorial Sloan-Kettering  
Cancer Center**

**THE TIME IS NOW.**

*The best cancer care. Anywhere.*

## SENIOR RESEARCH & ASSOCIATE RESEARCH MICROBIOLOGISTS

The Department of Natural Products Drug Discovery - Microbiology, at Merck Research Laboratories in Rahway, New Jersey, has several Senior and Associate Research positions to be filled immediately. Senior Research positions require a Ph.D. with post-doctoral experience. Associate Researchers should have a B.S. and optimally M.S. degree with expertise or experience as listed below.

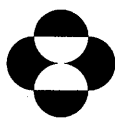
### Senior Research positions:

- Fungal Molecular Biologist, preferably with experience in the biosynthesis of secondary metabolites
- Microbial Physiologist with expertise in filamentous fungi and/or actinomycetes; molecular biology
- Microbiologist/Microbial Ecologist with substantial molecular biology expertise

### Associate Research positions:

- Microbiology/Microbial Ecology
- Microbial Molecular Biology
- Microbial Physiology

Please forward curriculum vitae, names of references and a statement of purpose to **Manager, Human Resources, Merck & Co., Inc., AD#2-NPDD, P.O. Box 2000, RY80A-3, Rahway, NJ 07065**. Merck is an equal opportunity employer.



**MERCK**  
Research Laboratories



**Director:  
Sensing and  
Systems Division**

The Office of Naval Research (ONR) is seeking an outstanding individual to serve in this Civil Service position in the Senior Executive Service (SES). Salary range is \$97,000 to \$115,700 (plus locality pay) per year, depending on qualifications. In addition to salary, career SES appointees are eligible to compete for performance awards and bonuses. Filling of this position is subject to position availability.

The Director, Sensing and Systems Division, is a key position in science and technology management in the Department of the Navy (DoN) and the Department of Defense (DoD). The incumbent is responsible for directing and managing extensive activities that include fostering, developing, administering, and executing an integrated program of basic research, applied research/exploratory development and advanced technology demonstration in a wide variety of fields. These fields include ocean acoustics; remote sensing and space; sensing-information dominance; coastal dynamics; acoustic and non-acoustic sensors, sources, and arrays; ocean engineering and marine systems; research facilities; undersea signal processing; littoral surveillance and mine warfare systems as well as tactical sensing support. Significant portions of the incumbent's efforts involve identifying world-class scientists and engineers who can contribute to the research and development needs of DoN and DoD and obtaining the services of these scientists and engineers under contracts and grants. His/her direction of the Division's programs involves the strategic use of DoN financial and human resources for science and technology and directly influences the character and capabilities of the Navy and the Marine Corps of the future as well as the national progress of knowledge and capabilities in the fields of science and technology which are under the cognizance of the Division as listed above.

Candidates must have progressive, responsible, and substantial experience, preferably with professional education at the doctoral level) in the performance and management of research, technology, and/or developmental programs in the areas as listed above. This experience must be evidenced by such factors as recent publications, presented papers, invited talks, leadership roles in professional organizations, substantial growth in programmatic responsibility, etc. Candidates must also have recent experience in the direct management and coordination of large integrated science and/or technology projects. Progressive and responsible experience in the performance or management of programs relating to remote sensing, undersea surveillance/acoustics, antisubmarine warfare, and mine countermeasures is desirable.

Interested persons should submit their application and a list of publications to: ONR, Satellite Human Resources Office, Attn.: Annc. #97-27 (SCI), 800 N. Quincy Street, Arlington, VA 22217-5660. **Applications will be accepted through 10/17/97 and must be received by that date.** Applicants may download a copy of the vacancy announcement from ONR's web site (<http://www.onr.navy.mil>). Those applicants not having access to the Internet, may request a copy of the announcement and supplemental forms from ONR's Vacancy Hotline, 703-696-0972. For further information, contact Ms. Sandra Weston, 703-696-0383. Hearing Impaired applicants may use our TDD number, 703-696-6357. For technical information, please call Dr. S. Ramberg, 703-696-4358.

**ONR IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER AND PROMOTES DIVERSITY IN THE WORKPLACE. WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY.**

## POSITIONS OPEN

The Department of Biology at the University of Northern Iowa invites applications for two tenure-track, ASSISTANT PROFESSOR positions effective August 1998. The successful candidates will be expected to develop a research program in biology involving undergraduate and graduate students, to contribute to the general education and graduate programs of the department, and to teach majors' courses from among the following, depending on the candidate's expertise: vertebrate field zoology (mammalogy, herpetology, or ichthyology); biogeography; invertebrate zoology; wildlife biology; field natural history; evolutionary biology; human physiology; animal physiology; histology. A Ph.D. in a biological science is required. Candidates who will complete the Ph.D. by the date of appointment are encouraged to apply. Teaching and postdoctoral research experience are desired. Faculty members are expected to seek extramural funding. Applications must be received by October 15, 1997, to be given full consideration. Please submit a curriculum vitae, undergraduate and graduate transcripts, a statement of research interests and goals, a statement of teaching interests including qualifications to teach courses from the above list, and three letters of reference to: **Dr. Alan Orr, Chair of Search Committee, Department of Biology, University of Northern Iowa, Cedar Falls, IA 50614-0421. FAX: 319-273-7125.** *The University of Northern Iowa is an inclusive academic community, hospitable to all. The University of Northern Iowa is an Equal Opportunity Educator and Employer with a comprehensive plan for Affirmative Action. The department encourages applications from minority persons, women, Vietnam-era veterans, and disabled persons.*

### ASSISTANT/ASSOCIATE PROFESSOR BEHAVIORAL NEUROSCIENCE

Faculty opening in the Department of Behavioral Neuroscience, School of Medicine, Oregon Health Sciences University (OHSU). The appointee would join the faculty at OHSU and affiliated Portland VA Medical Center in teaching medical students and offering Ph.D. and postdoctoral training in behavioral neuroscience supported by NIH training grants and individual research grants. Candidates should have a Ph.D. degree, postdoctoral experience, and demonstrated ability to conduct independent research in an area complementary to current faculty interests. The specific area of research is open, but of particular interest is someone with behavioral expertise studying learning and memory, behavioral endocrinology, and/or development. Candidates should send application letter, curriculum vitae, statement of research interests, recent reprints, and arrange to have three letters of recommendation sent to: **John C. Crabbe, Ph.D., c/o Ginger Ashworth, Department of Behavioral Neuroscience 1470, Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201-3098. Website: <http://www.ohsu.edu/som-BehNeuro/>.** Interviews will begin mid-October, 1997. *OHSU is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSORS (TWO) IN EVOLUTIONARY BIOLOGY/ECOLOGY

The Department of Biological Science at Florida State University invites applications for two positions at the Assistant Professor level. We are particularly interested in candidates in evolutionary ecology and/or systematics, but would consider any excellent candidate who will complement our current faculty in ecology, conservation biology, and evolution. Teaching responsibilities will include an undergraduate course in evolution and participation in the graduate program. Applicants should send a curriculum vitae, a statement of teaching interests, a description of research interests and goals, and relevant reprints. Applicants should also provide the names and telephone numbers of three references and arrange to have letters of recommendation sent to the search committee. All application materials must be received no later than September 19, 1997. Applications should be submitted to: **Ecology and Evolutionary Biology Search Committee, Department of Biological Science, Florida State University, Tallahassee, FL 32306-1100. E-mail: [search3@bio.fsu.edu](mailto:search3@bio.fsu.edu); website: <http://www.fsu.edu/~biology>.** *Florida State University is an Affirmative Action/Equal Access/Equal Opportunity Employer.*

**ASSOCIATE PROFESSOR.** Yale Pathology Department seeks a full-time investigator (M.D./Ph.D.) for development of advanced genetic deflection techniques for molecular diagnosis. Application deadline September 30, 1997. Contact: **Jon S. Morrow, M.D., Ph.D., Department of Pathology, Yale Medical School, 310 Cedar Street, BML 140, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### GENE DELIVERY IN STEM CELL BIOLOGY

The Department of Medicine and the Gene Therapy Program at the University of Minnesota invite applications for a tenure-track ASSISTANT/ASSOCIATE PROFESSOR (depending upon qualifications) position from candidates with a research program in the field of gene delivery systems who are interested in the development of novel gene transfer approaches targeting hematopoietic stem cells. Candidates must have a Ph.D. and/or M.D. degree (or foreign equivalent) and a minimum of two years of postdoctoral experience. They must have demonstrated the ability to carry out high quality research with publications in mainstream journals and to develop an extramurally funded research program. They will be expected to build a strong research program in gene delivery that will interact with other programs in the Department of Medicine. The University of Minnesota offers excellent laboratory facilities and excellent opportunities for collaborative research within the Department of Medicine, Institute of Human Genetics, Cancer Center, and other departments. Salary and start-up funds will be competitive.

Applicants should include a current curriculum vitae, statement of research interests and intentions, and three letters of reference before October 1, 1997, to:

**Richard A. King, M.D., Ph.D.**  
Director, Division of Genetics and Metabolism  
Department of Medicine  
University of Minnesota  
Box 485 F-UMC  
420 Delaware Street S.E.  
Minneapolis, MN 55455

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

### RESEARCH ASSISTANT PROFESSOR

The Department of Surgery at the University of Washington School of Medicine is seeking a Ph.D. in electrical engineering with experience in the fields of medical ultrasound imaging and computer graphics.

Duties: Develop and apply hardware and software in a team setting to monitor the evolution, over years, of arterial pathway disease, with ultrasound. Participate in the examination of patients with serious illness in a natural history study. Research and develop analysis software in UNIX and Application Visualization System (AVS) environment for performing multidimensional image rendering and quantitative measurement with spatial magnetic position systems. Develop and maintain a database of images to permit a temporal analysis of site-specific lesions over periods exceeding one year, including retrospective lesion identification. Teach postgraduates in multidimensional ultrasound image assembly and analysis.

Applicants should forward a letter of application and a complete curriculum vitae no later than September 22, 1997, to: **Kirk W. Beach, Ph.D., M.D., Research Professor, Department of Surgery, Box 356410, University of Washington School of Medicine, Seattle, WA 98195-6410.**

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

**ASSOCIATE PROFESSOR** or rank commensurate with experience. (job ID #7801) Department of Psychiatry, University of Illinois at Chicago (UIC), seeks Molecular Neurobiologist for a tenure-track faculty position to guide Departmental research colleagues as well as teach, participate in grant obtainment, and for student mentoring. M.D. or Ph.D. with research interests in function and expression regulation of ligand-gated ionotropic receptor subtypes and with research expertise in gene transfer and targeting. Send curriculum vitae, a summary of current and future research plans, and references from at least three senior investigators to: **Chair, Search Committee/Molecular Neurobiologist, Department of Psychiatry, Psychiatric Institute, UIC, 1601 West Taylor, 312W, M/C 912, Chicago, IL 60612. FAX: 312-433-8369.** Application review will begin September 1997. *UIC is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION—MOLECULAR NEUROBIOLOGY.** Immediately available to study cytokine signalling in nervous system. Must have Ph.D.-M.D., strong background in molecular biology and/or neuroscience. Experience with gene expression preferred. Send curriculum vitae or résumé, names and addresses of three references, to: **Aviva Symes, Ph.D., Pharmacology Department, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814. E-mail: [symes@bob.usuf2.usuhs.mil](mailto:symes@bob.usuf2.usuhs.mil).** *Equal Opportunity Employer/Affirmative Action.*

## POSITIONS OPEN

### CELL BIOLOGIST (TENURE-TRACK)

The Biology Department of Macalester College seeks a tenure-track ASSISTANT PROFESSOR with expertise in cell biology beginning September 1, 1998. Individuals with interest in one or more of the following specialties are especially encouraged to apply: developmental biology, electron microscopy, prokaryotic cell biology. The successful candidate will teach at all levels and will develop an active research program involving undergraduates. Postdoctoral and/or teaching experience is desirable. Macalester College is a private, selective undergraduate institution that emphasizes excellence in a context of internationalism, multiculturalism, and service. The college is located in a culturally rich, urban area. To apply send a letter, curriculum vitae, statement of teaching philosophy, and three letters of reference to: **Daniel J. Hornbach, Chair, Department of Biology, Macalester College, St. Paul, MN 55105. E-mail: [hornbach@macalester.edu](mailto:hornbach@macalester.edu); website: <http://www.macalester.edu/~biology>.** Review of applications will begin on November 1, 1997, and will continue until the position is filled. *The college does not discriminate in employment because of race, religion, creed, sex, national or ethnic origin, age, marital status, sexual orientation, or disability. Women and minorities are encouraged to apply.*

### UNIVERSITY OF CALIFORNIA, IRVINE TENURE-TRACK, ASSISTANT PROFESSOR

The Department of Biological Chemistry in the College of Medicine invites applications for a state-funded, tenure-track position at the Assistant Professor level. Applicants should hold the Ph.D. or Ph.D.-M.D. degree and have postdoctoral experience. Applicants with expertise in all areas of molecular biology and biochemistry are encouraged to apply. Expertise in genome-based research with medical relevance is highly desirable. Specialization can be in bioinformatics, human or model vertebrate system genetics, or biochemical basis of disease. Individual is expected to establish an independent, funded research program of high caliber and participate in the training of graduate and medical students. A curriculum vitae, statement of research plan and teaching interests, and three letters of reference should be submitted prior to November 15, 1997, to: **Department of Biological Chemistry Search Committee, Department of Biological Chemistry, College of Medicine, D240 Med Sci I, University of California, Irvine, CA 92697-1700.**

*The University of California, Irvine is an Equal Opportunity Employer.*

### NON-TENURE-TRACK ASSISTANT RESEARCH PROFESSOR

The Department of Physiology at the University of Kentucky College of Medicine invites applications for a non-tenure-track position at the Assistant Research Professor level. We seek an individual who will establish a strong research program that investigates the potential neurotrophic effects of acetylcholinesterase using molecular biological approaches.

Applicants must have a Ph.D. and/or M.D. degree and at least five years of postdoctoral experience. Interested individuals should send a curriculum vitae, a detailed statement of past experience, future research plans, and three letters of reference to: **Dr. Phyllis M. Wise, Chair, Department of Physiology, College of Medicine, University of Kentucky, Lexington, KY 40536-0084.** Review of applications will begin immediately.

*Women and minority candidates are encouraged to apply. The University of Kentucky is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR ZOOLOGY.** The Department of Zoology invites applications for two tenure-track positions starting January 1998. Research involving undergraduates expected. **INVERTEBRATE PHYSIOLOGIST:** Teaching introductory courses for majors and non-majors, and upper division classes (comparative physiology, cell biology, etc.). **MOLECULAR BIOLOGIST:** Teaching general education and upper-division classes (genetics, cell or molecular biology, etc.). Send cover letter addressing teaching philosophy and research interests, curriculum vitae, up to three reprints, and three letters of recommendation to: **Dr. Sam Zeveloff, Chair, Department of Zoology, c/o Human Resource Department, 1016 University Circle, Weber State University, Ogden, UT 84408-1016. Telephone: 801-626-6165.** Review of applications begins October 10. Position will remain open until filled. Visit our homepage for further information on Weber State University. **Website: [www.weber.edu](http://www.weber.edu).** *Weber State University is an Affirmative Action/Equal Employment Opportunity Employer.*



*National Center for Genome Resources*

Due to unprecedented growth, the National Center for Genome Resources, a bioinformatics company based in Santa Fe, New Mexico,

is seeking the following individuals to join our staff:

### Bioinformatics Associates

These individuals will be members of a team that through selective data analysis, annotation and review will evolve our sequence database into a functional genomic database. Responsibilities will include nucleotide and protein sequence analysis, identifying data inconsistencies, data mining from several sources, and processing mined data to create highly curated data sets. Individuals must be willing to learn computer technology and become expert in Perl, SQL and NT or UNIX. Qualifications include: experience with commonly used DNA/protein analysis programs, MS in Molecular Biology, Genetics or related fields, and, although this is not a wet lab position, 2-3 years molecular biology lab experience is required.



To find out more about NCGR, you may access our homepage at [www.ncgr.org](http://www.ncgr.org).

E-mail to: [hr@ncgr.org](mailto:hr@ncgr.org)  
(in ascii or postscript format)  
via fax to: 1-505-995-4461  
via mail to: NCGR  
1800-A Old Pecos Trail  
Santa Fe, NM 87505 EOE

Join Nycomed, Inc., the worldwide leader in diagnostic imaging agents. We currently have the following opportunity available in the Biological Sciences division of our suburban Philadelphia Research and Development facility.

## RESEARCH INVESTIGATOR

The selected candidate will design and execute research evaluations of compounds using in vitro isolated animal/human organs and tissues and develop/execute secondary assays in support of isolated organ/tissue evaluations. Qualifications include a Ph.D. in Pharmacology or related discipline with two years' post-doctoral experience. Experience with pharmacological models using isolated organ and/or tissue evaluations is required. Electrophysiology knowledge is desired. Experience with analytical assays for cytokines, autokines, growth factors, and other cellular mediators is preferred. **Position #NYM-11-97**

We offer an exceptional salary and benefits package. For immediate consideration, please FAX resume with salary requirements and Position # to: 610-225-4404, or mail to: Nycomed R&D, Human Resources TAF, 466 Devon Park Drive, P.O. Box 6630, Wayne, PA 19087-8830.



EQUAL OPPORTUNITY EMPLOYER M/F/D/V

# Join the leader in **LIFE SCIENCE** research equipment

Packard Instrument Company, an international leader in the design and manufacture of life science research equipment, has several challenging and rewarding opportunities for scientists to join our winning sales and marketing team:

### Applications Manager

You will lead the domestic (USA) applications department which supports our field sales employees and customers for bioanalytical instruments. To qualify, you must have 3-5 years scientific research experience, teaching/training experience, a background in managing research personnel, experience with lab instrumentation, computer proficiency, and a B.S. in Biology, Molecular Biology, Immunology or a related field. Position located in Connecticut with 35% travel.

### Director of Scientific Education

Travel the world training our customers, employees, and representatives on Packard products. PhD or Masters degree in biological sciences, 3-5 years lab research, teaching experience, and proficiency in the use of lab instrumentation required. Position located in Connecticut with extensive domestic and international travel required.

### HTRF Sales Engineer

You will sell our innovative fluorescence technology, instruments, and reagents to our pharmaceutical customers (USA). B.S. in a life science and a minimum of 3 years selling analytical instruments or immunology/biological assays required. Position based in New England with 35% travel.

### HTRF Applications Scientist Europe

Based from our U.K. office, you will be the technical expert on the application and use of our innovative fluorescence technology to support our European customers. PhD in Biochemistry or a related field, and 2-3 years lab experience in assay development, assay validation, and labeling/conjugation methods are required. Extensive travel throughout Europe required; French or German language skills a plus.

### Applications Specialists

You will provide applications assistance to our customers and sales employees for bioanalytical instruments, focusing on liquid handling instruments or microplate reader instruments. B.S. in a biological science, 2-4 years lab research experience, and knowledge of computer-controlled scientific instruments required. One of these positions requires living in Japan to support our customers there. Japanese and English language skills will be required. The USA-based positions are located in Connecticut with 40% travel.

### Sales Engineers

Sales opportunities are available in Texas, North Carolina, Illinois & California. B.S. in a life science, 2-5 years of life science lab research, and 2 years experience selling analytical instruments to research labs, pharmaceutical and biotech companies required. These positions require 35% overnight travel. Compensation commensurate with experience.

We offer competitive salaries, comprehensive benefits, and the challenge and excitement of working with other scientists in developing, marketing and supporting life science research instrumentation and technologies. Please send your resume (indicating position desired) with salary history to: Director of Human Resources, Packard Instrument Company, 800 Research Parkway, Meriden, CT 06450, USA. Or email your resume to: [www.packardinst.com](http://www.packardinst.com) or [pi-jobposting@packardinst.com](mailto:pi-jobposting@packardinst.com)



**Packard**  
A Packard BioScience Company

Equal Opportunity Employer



## POSITIONS OPEN

### HARVARD UNIVERSITY ASSISTANT PROFESSOR MOLECULAR AND CELLULAR BIOLOGY (MCB)

The Department of Molecular and Cellular Biology has an opening for an Assistant Professor (entry level) starting September 1998. Our department includes a broad range of fields including molecular biology, cellular biology, developmental biology, structural biology, neurobiology, molecular evolution, and molecular genetics. We are particularly, although not exclusively, interested in candidates specializing in research at the interface between chemistry and biology. Applications should include a curriculum vitae, reprints of publications, and a statement of present and future research plans (one to three pages). Complete applications and three letters of recommendation, solicited by the applicant, should be received no later than October 1, 1997, by: MCB Search Committee, Harvard University, 7 Divinity Avenue, Cambridge, MA 02138. Telephone: 617-495-2327. *Harvard University is an Affirmative Action/Equal Opportunity Employer. We strongly encourage applications from women and minority groups.*

### UNIVERSITY OF ALABAMA AT BIRMINGHAM DEPARTMENT OF DERMATOLOGY SCHOOL OF MEDICINE

Applications are invited for a faculty position at the INSTRUCTOR or ASSISTANT PROFESSOR level to work in the areas of immunodermatology and tumor biology. The individual chosen will have the opportunity to collaborate with research groups both within the basic sciences and in clinic departments in the School of Medicine. He/she should have experience in cellular immunological and molecular biological techniques. Candidates must have a Ph.D. or equivalent and have sufficient postdoctoral experience to demonstrate both significant accomplishments and outstanding promise. A curriculum vitae, a statement of research interest, and the names of three references should be sent to: Dr. Craig A. Elmetts, Professor and Chair, Department of Dermatology, University of Alabama at Birmingham, University Station, P.O. Box SDB 76, Birmingham, AL 35294-0007.

Virginia Commonwealth University's Institute for Drug and Alcohol Studies announces a tenure-track ASSISTANT/ASSOCIATE PROFESSOR position with a Ph.D. or equivalent in neuroscience or pharmacology, at least three years of postdoctoral experience, and an outstanding record of research accomplishments in the area of molecular pharmacology. Applicants with an active research interest in the area of drug and alcohol abuse are especially encouraged to apply. The chosen candidate must develop an independent research program and contribute to the graduate and professional school teaching. An exceptional candidate with a proven track record may be considered at the Associate Professor level. Send a curriculum vitae, research proposal, and names, addresses, and telephone numbers of three references by November 1, 1997, to: Dr. Billy R. Martin, Department of Pharmacology and Toxicology, P.O. Box 980613, Virginia Commonwealth University, Richmond, VA 23298-0613. A position description is available upon request. *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer and encourages women, minorities, and persons with disabilities to apply.*

### PLANT COMMUNITY ECOLOGIST

The Department of Biology, Wake Forest University, invites applications for a tenure-track position in Plant Community Ecology at the ASSISTANT PROFESSOR level. Applicants who are field-oriented and have strength in quantitative methods, including multivariate statistics, are encouraged to apply. Responsibilities will include establishing an active research program, participating in the M.S. and Ph.D. curricula, teaching an upper-level course in community ecology, and participating in the lower-division core biology sequence. Ability to teach multivariate statistics is an asset. Applicants should send separate statements of teaching interests/philosophy and research interests, curriculum vitae, and three letters of recommendation to: Dr. Kathleen A. Kron, Chair, Plant Community Ecologist Search Committee, Department of Biology, Wake Forest University, Winston-Salem, NC 27109-7325. Deadline: 15 November 1997. *Wake Forest University is an Equal Opportunity Employer and is strongly committed to increasing the diversity of its faculty. Applications from women and minorities are encouraged.*

## POSITIONS OPEN

### HEAD OF RESEARCH INITIATIVE ON GASTROINTESTINAL AND LIVER BIOLOGY

The University of Illinois at Chicago has forged a multidisciplinary research initiative focused on gastrointestinal and liver biology. The initiative currently has a core group of 20 tenured/tenure-track faculty members from varied disciplines.

The University is seeking to recruit a basic Scientist of national and international eminence who is an authority on epithelial biology of gastrointestinal/hepatic systems to head this initiative. We seek a candidate with a Ph.D. degree and an established federally funded basic research program. The position will be a tenured Professorship with the primary appointment in the Department of Medicine and a secondary appointment in the Department of Physiology and Biophysics. The appointee will be expected to integrate research and develop programs in gastrointestinal and liver biology. Applicants should submit curriculum vitae to: Thomas J. Layden, M.D., Professor of Medicine and Chief, Section of Digestive and Liver Diseases, University of Illinois at Chicago, 840 South Wood Street (M/C 787), Chicago, IL 60612-7323. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### PLANT SYSTEMATICS

ASSISTANT PROFESSOR. Entry-level tenure-track position, Ph.D. required. Responsibilities include: teaching undergraduate courses in systematic botany, general botany, and general biology; teaching selected graduate courses; serving as a mentor for undergraduate research and Master's theses; maintaining herbarium; seeking extramural funding. Candidate should have expertise in flora of eastern U.S. Appalachian State University, with an enrollment of 12,000, ranks in the top four of the 16 UNC campuses in SAT scores, retention, and graduation rates. The Biology Department (website: [www.biology.appstate.edu](http://www.biology.appstate.edu)) has 21 faculty, 600 majors, and 35 graduate students. Send letter of application; curriculum vitae; description of research and teaching interests; and names, addresses, and telephone numbers of three references to: Dr. Douglas Meikle, Chair, Department of Biology, Appalachian State University, 572 Rivers Street, Boone, NC 28608. Telephone: 704-262-3025. Completed applications due by October 3, 1997. *Appalachian State University is an Equal Opportunity Employer.*

The Department of Chemistry of the University of Wisconsin-Madison invites applications for one or more tenure-track appointments as an ASSISTANT PROFESSOR in any area of chemistry. The position requires development of an internationally recognized scholarly program and teaching at the undergraduate and graduate levels. Applicants must have a Ph.D. in chemistry or a related field and, except in unusual circumstances, should also have postdoctoral research experience. Applicants should provide a curriculum vitae, a concise description of research plans, and have three letters of recommendation sent to: Professor Paul M. Treichel, Chair, Search Committee, Department of Chemistry, University of Wisconsin-Madison, 1101 University Avenue, Madison, WI 53706. To guarantee full consideration, the Committee should receive application material and letters by October 15, 1997. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer; applications from qualified women and minority candidates are encouraged. Unless confidentiality is requested in writing, information regarding the identity of the applicants must be released upon request. Finalists cannot be guaranteed confidentiality.*

RESEARCH ASSISTANT/ASSOCIATE PROFESSOR. The Division of Neonatology invites applications from experienced individuals with a Ph.D. in cell biology, molecular biology, or related fields to lead Division research focused on age-related cardiopulmonary and central nervous system injury. Research areas include but are not limited to: cytokine modulation of lung injury; the role of nitric oxide in lung and brain injury; neuroprotection of the developing fetal and neonatal brain; and evaluation of novel genes influenced by hyperoxia. Start-up funds, laboratory space, and extensive shared resources including cell culture, transgenic animals, protein microsequencing, macromolecular modeling, among others, are provided. Academic rank determined by candidate's rank and credentials. Send curriculum vitae to: Dr. Ronald N. Goldberg, Neonatal-Perinatal Medicine, Duke University Medical Center, Box 3179, Durham, NC 27710. Telephone: 919-681-6024; FAX: 919-681-6065; e-mail: [goldb008@mc.duke.edu](mailto:goldb008@mc.duke.edu). *An Equal Opportunity Employer.*

## POSITIONS OPEN

### DEPUTY DIRECTOR U.S. ARMY RESEARCH LABORATORY DEPARTMENT OF THE ARMY

The U.S. Army Materiel Command is seeking applicants for the career Senior Executive Service position of Deputy Director, U.S. Army Research Laboratory. The Army Research Laboratory has a staff of over 2,000 composed primarily of scientists and engineers. The Laboratory reports directly to a four-star General and is headed by a permanent civilian Director. The position has an annual salary range of \$103,897 to \$123,100 depending upon individual qualifications and salary history. The individual selected will also be eligible to earn performance-related bonuses and awards.

The successful candidate will be expected to: Share responsibilities with the Director for planning, directing, and managing Army Research Laboratory programs to meet the needs of the Army and the nation well into the 21st century. Provide line authority and technical direction to over 2,000 military and civilian employees who are responsible for basic and applied research and advanced technology conducted at locations throughout the United States. Maintain an international reputation for scientific leadership and serve as a principal laboratory representative to other government agencies, private industry, academic institutions, and international organizations. Applicants should possess the following qualifications: Ability to manage a high performing laboratory responsible for research and development in the areas of information science, sensors, and electron devices, weapons and materiel science, human engineering, vehicle technology, high performance computing, and survivability/lethality. Ability to recognize the need and develop the strategy for technical programs which further Army mission performance through the application of technology. Ability to be recognized as a science or engineering expert as evidenced by professional accomplishments, publications, presentations, patents, awards, etc. *Applicants must be U.S. citizens and able to obtain a top secret clearance.* Interested individuals may obtain a complete application package for Announcement No. SES DA-13-97 by calling: Ms. Tammy Higgins, Telephone: 703-274-9415 or by writing to: Commander, U.S. Army Materiel Command, ATTN: AMCPE-CS, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001. Applications must be postmarked not later than 18 October 1997. *The Department of the Army is an Equal Opportunity Employer.*

### NMR OPERATOR YALE UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF INTERNAL MEDICINE

An NMR Operator position is available at Yale University, Department of Internal Medicine for NMR studies of diabetes. Research will focus on the use of *in vivo* <sup>13</sup>C and <sup>31</sup>P NMR to study regulation of glucose metabolism in diabetes. Applicants must have a strong background in the area of NMR spectroscopy. Experience using modern animal or clinical NMR systems and a B.S. or preferably an M.S. in chemistry or physics is desirable. Equipment available included a 2.1T human system (1m bore), 7T and 4.7T animal systems, and 11.7T and 8.4T analytical systems. 4.7T human system (1m bore) is anticipated in 1997.

FAX or mail curriculum vitae and references to:

Gerald I. Shulman, M.D., Ph.D.  
Department of Internal Medicine  
Yale University School of Medicine  
P.O. Box 208020  
New Haven, CT 06520-8020  
FAX: 203-785-6015

*Equal Opportunity Employer.*

### RESEARCH ASSOCIATE POSITION BLADDER EPITHELIAL DIFFERENTIATION NEW YORK UNIVERSITY MEDICAL SCHOOL

A Research Associate position is available for a recent Ph.D. to study the ultrastructural and molecular differentiation of mammalian bladder epithelium (*J. Biol. Chem.* 270:29752, 1995; *PNAS* 92:679, 1995; *ibid* 93:9630, 1996). Candidates should have good training in various electron microscopic techniques, including TEM, SEM, immunolocalization at the ultrastructural level; in immunological and biochemical analyses of proteins; and in cell culture techniques. Send curriculum vitae and three letters of recommendation to: Tung-Tien Sun, Ph.D., Epithelial Biology Unit, Departments of Dermatology and Pharmacology, NYU Medical School, 550 1st Avenue, New York, NY 10016. FAX: 212-263-8561; e-mail: [sunt01@mcrcr.med.nyu.edu](mailto:sunt01@mcrcr.med.nyu.edu).

Stratagene is an industry leader in the development and manufacture of molecular biology research products located in La Jolla, the heart of the San Diego biotechnology community. We offer these outstanding career opportunities:

## PRODUCTION ASSOCIATES ENZYMOLGY

We seek an experienced Production Associate to be responsible for quality control, process development, and troubleshooting kits and proteins pertaining to both molecular and cell biology. Requires a BS/BA in Molecular Biology or Biochemistry and at least 4-7 years' experience. Manufacturing experience preferred. Req. 32028-97R.

## LIBRARIES

Ideal candidates will possess a minimum of a BS/BA in Molecular Biology or Biological Science and 2-3 years' experience, including a background in cDNA and genomic library construction and screening, PCR, RNA, lambda and plasmid technology. Req. 32062-97R.

Stratagene offers a rewarding work environment in beautiful La Jolla, a competitive salary and excellent benefits. Send resume to: Stratagene, 11011 N. Torrey Pines Road, La Jolla, CA 92037, Attn.: Professional Staffing/Req.\_\_\_\_. Drug and alcohol testing required. EOE.



## Faculty Position DEVELOPMENTAL BIOLOGY The Rockefeller University

The Rockefeller University invites applications for a faculty position of Assistant Professor and Head of Laboratory in developmental biology. We particularly welcome applicants with research interests in such areas as the molecular basis of early embryonic development, cell signaling and transduction pathways.

Applicant should send a curriculum vitae (including a publication list), a statement of current and future research interests (no longer than three pages), and the names and addresses (including telephone, fax and E-mail information) of three references to:



**Dr. A.J. Hudspeth**  
The Rockefeller University  
1230 York Avenue, Box 314  
New York, NY 10021-6399

To assure consideration, all materials must be received by September 30, 1997.

The Rockefeller University is an  
Equal Opportunity/Affirmative Action Employer



**Research Scientist**  
Mycology/Microbiology  
In Vitro/In Vivo  
Antibiotic Evaluation  
Toxicology  
high throughput screening  
**Assistant Director**  
Toxicology

Microcide Pharmaceuticals, Inc., an innovative San Francisco Bay Area pharmaceutical company focused on the discovery of novel anti-infective agents, is seeking highly motivated individuals to join its growing state-of-the-art discovery research team. Successful candidates will be part of a multidisciplinary team of chemists, biologists, and pharmacologists working at the frontier of anti-infective discovery research. We seek qualified individuals to fill the following positions:

**Mycology/Microbiology.** Scientist will provide assessment of activity of leads from antifungal discovery program. Qualified applicants will have a Ph.D. degree in medical microbiology, mycology, or related experience in medical mycology and *in vitro* and *in vivo* evaluation of antifungal agents. (Job Ref.: #839)

**Toxicology.** Management-level (Assistant Director) and Scientist-level positions require a Ph.D. degree in toxicology or a related field. Applicants for the Scientist level position must have experience using *in vitro* and *in vivo* models for assessment of toxicity of discovery leads. Candidates for the Assistant Director position must have demonstrated leadership abilities and expertise in the toxicological assessment of compounds in drug discovery/development programs. (Job Ref.: #810-T)

**In Vitro/In Vivo Antibiotic Evaluation.** Scientist will have key role in developing testing strategies for antibacterial compounds entering into the initial stages of pharmacological evaluation. Qualified applicants will have a Ph.D. degree in microbiology, biology, pharmacology, or a related field. Experience in evaluation of anti-infective agents using *in vitro* methods and animal models of infection is required. (Job Ref.: #810-ESG)

**High Throughput Screening.** Ph.D. Scientists and Research Associates/Assistants will have a background in Biochemistry, Biology, Chemical Engineering, or related field, with experience (minimum 2 years) in assay development, bacterial, yeast, or DNA-based screening models, high throughput screening methodologies, biodata analysis. Must be computer literate, with knowledge of statistical and spreadsheet analysis software. Database experience preferred. Software development experience desirable. (Job Ref.: #714-HTS)

Successful candidates for all positions will have excellent communication skills, and will have the ability to work both independently and as part of a multidisciplinary team. Macintosh literacy is desired. These are exciting opportunities for scientists with initiative, flexibility, and energy to contribute to a young organization that is emerging as a leader in its field. We offer competitive salaries and excellent benefits. Please send or fax your résumé to: Human Resources Dept., Microcide Pharmaceuticals, Inc., 850 Maude Avenue, Mountain View, CA 94043. Attn: Job Ref. XX997. Fax: (650) 526-3034. No phone calls please.

Equal Opportunity Employer



Apollon, a leader in the development of DNA and genetic-based vaccines, is seeking to fill the following positions:

**METHODS DEVELOPMENT RESEARCH SCIENTIST** who will be responsible for developing analytical methods to characterize DNA vaccines, developing appropriate quality control assays, and directing assay validation studies. The successful candidate will be a bench scientist with an interest in assay development technology and the ability to work effectively in a collaborative environment.

This position requires a Ph.D. in molecular biology or biochemistry with a focus on nucleic acids, one to three years of postdoctoral experience, preferably in an industrial setting. The candidate will have direct experience with molecular biology techniques, enzymology, and HPLC. Candidates with experience in DNA vaccines or non-viral gene therapy products are preferred. An understanding of cGMP's would be advantageous. **Job Code: MD 0897**

**ANALYTICAL RESEARCH ASSISTANT** who will be responsible for accurately performing standard molecular biology techniques for routine QC analysis. Must be capable of documenting work carefully and working well in a collaborative environment.

The candidate must have a B.S. in biology, biochemistry, or related degree with zero to two years of experience. Background with gel electrophoresis, tissue culture, blots, bioassays, HPLC, and DNA methods is desirable. Experience in a cGMP environment a plus. **Job Code: AR 0897**

**RESEARCH ASSOCIATE—MOLECULAR BIOLOGY** who will provide support for molecular and cell biology research projects including vaccine technology development. We are looking for a solid molecular biology background with experience in tissue culture. Experience with immunological techniques, virology, and/or bacteriology a plus. B.S. with three to five or M.S. with two to three years of experience. **Job Code: MB 0897**

Applicants should refer to job codes and respond to:

QC 08-97  
Human Resources  
Apollon, Inc.  
1 Great Valley Parkway  
Malvern, PA 19355  
FAX: 610-647-9732

#### IMMUNOLOGIST

MEGAN Health, Inc. has an opportunity for a Ph.D.-level scientist to design, develop, and evaluate vaccines using live avirulent *Salmonella* vector systems. Candidates should have three-plus years of graduate and postdoctoral research experience in mucosal, humoral, and cellular immunology. Expertise in induction monitoring and evaluation of avian and/or mammalian (murine/human) immune responses is especially desired. Candidates should have some experience with various vaccination routes and with molecular genetics. Familiarity with GLP is a plus.

#### MOLECULAR BIOLOGISTS

MEGAN Health, Inc. has opportunities for Ph.D.-level scientists to conduct research leading to the development of human and animal vaccines using avirulent *Salmonella* vector systems. Three-plus years of experience in molecular biology, preferably working with bacterial or viral pathogens, is required. Research experience in microbial genetics, immunology, and animal science, plus familiarity with the pharmaceutical or veterinary industry, GLP, are a plus.

Excellent benefits package. Send résumés in confidence to: Darleen Phillips, MEGAN Health, Inc., 3655 Vista Avenue, St. Louis, MO 63110. FAX: 314-776-3317. MEGAN Health is an Equal Opportunity Employer.

**RESEARCH TECHNICIAN POSITION.** The Yale University Magnetic Resonance Center and its faculty specialize in the use of NMR spectroscopy with labelled isotopes (e.g.,  $^{13}\text{C}$ ) in the area of metabolic and functional regulation in animals and humans. Applicants with experience in biological sample preparation for analytical measurements by high-resolution NMR, CG-MS, or HPLC analysis and ion-exchange separation techniques are encouraged to apply. FAX curriculum vitae and references to: D. L. Rothman, 203-785-6643; or e-mail: rothman@mrccs.med.yale.edu.

#### RESEARCH POSITIONS

The Immunohematology/Immunochemistry research program of the Blood Research Institute seeks qualified individuals (M.D. and/or Ph.D.) with research interests in immunochemistry or vascular biology plus experience/expertise in protein chemistry, membrane biophysics, or cell and molecular biology. Current research focus is the regulation of complement and coagulation systems at cell surfaces. Candidates for Postdoctoral Fellowship or staff appointments will be considered. Send résumé, brief description of research interests, and references to:

Peter J. Sims, M.D., Ph.D.  
The Blood Research Institute  
The Blood Center of Southwestern Wisconsin  
P.O. Box 2178  
Milwaukee, WI 53201-2178  
FAX: 414-937-6284  
E-mail: peter\_s@smtpgate.bcsew.edu  
Equal Opportunity Employer.

#### GRANT SPECIALIST PH.D. RESEARCH ASSOCIATE DEPARTMENT OF BIOLOGY Southwest Texas State University

Salary: Commensurate with experience. Closing date: Review of applications will begin September 30, 1997, and will continue until position is filled. Job number: 021.

A Ph.D.-level, Postdoctoral/Research Associate is needed to participate in studies aimed at characterization of genetic factors associated with heritable susceptibility to induced carcinogenesis using fish model systems. This position will require a visitation at a collaborating research laboratory in North Carolina to construct YAC libraries using facile *in vivo* recombination methodologies. The Postdoctoral Associate may supervise graduate trainees. Experience in genetic analyses using model systems, PCR (Q-RT-PCT, RAPiD mapping, etc.) and standard recombinant DNA methods (library screening, Southern and Northern hybridization, subcloning, DNA sequencing, etc.) is desirable. A newly renovated and well-equipped laboratory will be occupied in fall 1997 for these investigations. A valid driver's license is required. A driving record check will be performed on the selected applicant. Submit an SWT application, résumé, and a list of three references with addresses and telephone numbers to: **SWT Personnel Office, 601 University Drive, J. C. Kellam Building, Suite 340, San Marcos, TX 78666.** For an application, **Telephone: 512-245-2557.** Résumés alone will not be considered. For more information, **Telephone: 512-245-2032; e-mail: rw12@swt.edu.** SWT is an Affirmative Action/Equal Opportunity Employer.

#### ADDITIONS CLINICAL RESEARCHER

Virginia Commonwealth University announces the opening of a tenure-track faculty position in the Institute for Drug and Alcohol Studies with an appointment in the Division of Substance Abuse Medicine. Faculty rank and departmental affiliations will depend on the professional background of the applicant and past record. This is primarily a research appointment with some teaching and, when appropriate, minimal clinical responsibilities. This position is for a Ph.D., M.D., or equivalent degree holder who has experience in clinical research in substance abuse. Send a curriculum vitae, statement of research background and interests, and the names of at least three persons who can provide a reference to: **Dr. Sidney H. Schnoll, Division of Substance Abuse Medicine, Box 980109, Medical College of Virginia, Richmond, VA 23298-0109.** Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer and encourages women, minorities, and persons with disabilities to apply.

#### CONSERVATION SCIENTIST

The Freer Gallery of Art and the Arthur M. Sackler Gallery, Smithsonian Institution, seek a Conservation Scientist to perform scientific work identifying and analyzing the materials of works of art and providing technical support for conservation efforts. Participation in research projects encouraged. Federal civil service position with benefits, salary \$38,330 to \$49,831. To receive an announcement, **Telephone: 202-357-4880 ext. 444** to leave a voice message. Call Toni Lake at **Telephone: 202-357-4880 ext. 206** for information. Equal Opportunity Employer.



#### INDUSTRIAL POSTDOCTORAL POSITIONS

Molecular Dynamics, Inc. is a leading developer, manufacturer, and international marketer of instrument systems that accelerate genetic discoveries and analysis. We are seeking Postdoctoral Fellows for two-year appointments in our genomics research program. Projects target improving DNA sequencing methodologies, automating sample preparation, and extending microarray technologies.

**MICROFABRICATION ENGINEER.** Develop chip-based components and subsystems for manipulating nanoliter-scale samples. Responsibilities will include co-developing strategies for implementing microfluidic systems and demonstrating their commercial feasibility; designing, fabricating, and testing components; and providing in-house expertise in microfabrication technologies.

**BIOCHEMICAL ENGINEER.** Develop and optimize biochemical processing of nanoliter-scale samples. Participate in development of microfluidic-based devices. Experience in surface interactions of biologicals required; background in DNA sequencing or microfluidics is a plus.

**MOLECULAR BIOLOGIST/BIOCHEMIST.** Develop and characterize hybridization chemistries in microarray format. Participate in DNA microarray application development. Experience in library management, genomic expression, and large-scale genome mapping.

**MOLECULAR BIOLOGIST/GENETICIST.** Develop and optimize linkage analysis and mutation-screening protocols using capillary array electrophoresis. Ph.D. in genetics, molecular biology, or related field required. Experience with PCR, microsatellite analysis, and SSCP or fluorescent DNA sequencing essential. Interest in triplet-repeat expansion disorders a plus.

All candidates should have a record of innovative contributions to fields related to this research, a hands-on approach to research, and the ability to work effectively in a multidisciplinary team.

Disclaimer: may not fill all positions with postdoctorates.

Please send résumé to: **Professional Staffing, 928 East Arques Avenue, Sunnyvale, CA 94086.** FAX: 408-773-8343. We are an Equal Opportunity Employer.

#### MOLECULAR NEUROBIOLOGIST

The Department of Cell Biology, Developmental Biology, and Neurobiology at Rutgers University, New Brunswick invites applications for a tenure-track position from individuals with a record of significant research achievement in cellular neuroscience. Especially encouraged to apply are those employing state-of-the-art molecular approaches to investigate cell signaling, synaptic plasticity, or neural integration. Excellent facilities and competitive start-up funds are available in a department undergoing rapid growth. New faculty will also join a University-wide neuroscience community with strengths in neural development and regeneration, membrane excitability, neuropharmacology, and behavioral neuroscience. Successful candidates will be expected to develop an active, externally funded research program, and contribute to graduate and undergraduate education. Applicants should send a curriculum vitae, a statement of research interest, and three letters of recommendation to: **Dr. Richard E. Triemer, Chair, Department of Cell Biology, Developmental Biology and Neurobiology, Nelson Biological Laboratories, Rutgers University, Piscataway, NJ 08855-1059.** Review of applications will begin October 15 and continue until a suitable candidate is recruited. Rutgers University is an Equal Opportunity/Affirmative Action Employer.

The U.S. Department of Agriculture, Food Safety and Inspection Service, Office of Public Health and Science, Epidemiology and Risk Assessment Division, has a **RISK ANALYSIS SCIENTIST** position to be filled at the GS-14 level. The incumbent must possess a skill in performing quantitative microbial risk assessment in order to accomplish microbial risk and cost-benefit analyses related to food safety and public health. Applicants must **Telephone: 202-720-8601** to request a copy of vacancy announcement number FSIS-97-20A for the eligibility requirements, summary of duties, and procedures on how to apply for this position. Complete applications must be postmarked no later than October 14, 1997. This is a reannouncement of FSIS-97-20; previous applicants need not reapply. USDA is an Equal Opportunity Employer.





As a means of increasing the number of U.S. citizens trained in disciplines of science and engineering of military importance, the Department of Defense plans to award approximately 90 new three-year graduate fellowships in April 1998. National Defense Science and Engineering Graduate Fellowships may be awarded for study and research leading to doctoral degrees in, or closely related to, the following disciplines:

**AERONAUTICAL AND ASTRONAUTICAL ENGINEERING**  
**BIOSCIENCES** (Includes Toxicology)  
**CHEMICAL ENGINEERING**  
**CHEMISTRY**  
**COGNITIVE, NEURAL, AND BEHAVIORAL SCIENCE**  
**COMPUTER SCIENCE**  
**ELECTRICAL ENGINEERING**  
**GEOSCIENCES** (Includes terrain, water, and air)  
**MATERIALS SCIENCE AND ENGINEERING**  
 (Includes Manufacturing Sciences and Engineering)  
**MATHEMATICS**  
**MECHANICAL ENGINEERING**  
**NAVAL ARCHITECTURE AND OCEAN ENGINEERING**  
**OCEANOGRAPHY**  
**PHYSICS** (Includes Optics)

National Defense Science and Engineering Graduate Fellows selected in 1998 will receive a stipend in addition to full tuition and required fees. The stipend amount starts at \$17,000.

**Recipients of 1998-1999 National Defense Science and Engineering Graduate Fellowships do not incur any military or other service obligation.**

Specific information regarding the fellowship and an application package are available from Battelle Memorial Institute, a not-for-profit research institution, which is administering the program for the Department of Defense.

Additional information and an application are available from:

**NDESG Fellowship Program**  
 200 Park Drive, Suite 211  
 P.O. Box 13444  
 Research Triangle Park, NC 27709-3444  
 ATTN: Dr. George Outterson  
 Phone: (919) 549-8505  
 Fax: (919) 549-8205  
 NDESG@ARO-EMH1.ARMY.MIL  
<http://www.battelle.org/ndseg/ndseg.html>



Completed applications must be received by Battelle by **January 21, 1998**.

## Postdoctoral Fellowship



Isis Pharmaceuticals, a dynamic biopharmaceutical company and a leader in antisense technology, has an exceptional opportunity for a Postdoctoral Fellow to study the molecular mechanism of antisense drugs. The selected candidate must have a Ph.D. and experience in molecular biology, biochemistry, enzymology, and pharmacology.

With strong funding and excellent academic ties, Isis offers a superb environment for outstanding professionals, as well as excellent salaries and benefits, including equity participation. We are located in North Coastal San Diego County, an area offering a wide range of recreational advantages, as well as proximity to world-class educational institutions. For consideration, send your CV, names of three references, and cover letter to: Isis Pharmaceuticals, Human Resources, Code 244, 2292 Faraday Ave., Carlsbad, CA 92008. Principals only. No phone calls please. EOE.



**ISIS PHARMACEUTICALS**

## REACH A NEW LEVEL OF RESEARCH FREEDOM AT



At Parke-Davis Pharmaceutical Research Division of Warner-Lambert Company, inspired science and a strategy of innovation has made us a leader in the pharmaceutical industry. Currently, we are seeking these individuals to join our team in Ann Arbor, MI.

## POSTDOCTORAL FELLOWS IN CHEMISTRY

There are three postdoctoral openings in the Chemistry Department. The successful candidates will be recent Ph.D. graduates in organic or medicinal chemistry with extensive experience in organic synthesis or combinatorial/parallel synthesis and modern analytical methods (NMR, MS and HPLC). Experience using molecular modeling tools would be advantageous. **Job Code: RJB-974173**

## DISCOVERY VIROLOGIST

The selected Virologist will have experience with DNA viruses, including herpesviruses. The position is focused on the discovery and target elucidation of new antiviral agents targeted against DNA viruses. Training and experience in all aspects of laboratory virology and advanced molecular biology techniques are essential. The position will require a demonstrated ability to work independently in planning, performing, collecting and analyzing data. Experience with basic biochemical and immunological techniques is also helpful. **Job Code RJB-97267**

## VIROLOGIST

The chosen Virologist will possess a special interest in both RNA and DNA viruses. The successful candidate will have training and experience in all aspects of molecular virology including research experience with HIV in a BSL3 facility. Prior experience with techniques related to isolation and culture of primary HIV isolates from patient samples is helpful. The selected individual will be well trained in advanced molecular biology techniques as well as experienced in basic biochemical and immunological techniques. Experience with gene chip technology a plus. A demonstrated ability to work independently in planning, performing, collecting and analyzing data is required. **Job Code: RJB-97268**

For both positions a degree in Virology, Microbiology or related biomedical field is required; a BS with 5 years' experience or a MS with 3 years' experience along with a record of productive research is desirable.

If you're highly motivated in scientific research, mail, fax or e-mail your CV\*, a brief summary of your research accomplishments and 3 references, indicating the Job Code of interest, to: **Parke-Davis Pharmaceutical Research, Human Resources Department, 2800 Plymouth Road, Ann Arbor, MI 48105. Fax: (313) 998-3394. E-mail: [resume@aa.wl.com](mailto:resume@aa.wl.com)**

\*Submit CV on laser-quality white paper, with legible 10 point or larger type, and avoid bold-face, italics, borders, etc.

Equal opportunity in action.  
Smoke-free work environment.

Since 1992, Ontogen has established itself as a leader in the development of automated organic synthesis technologies. Our mission is to utilize modern tools of chemistry and biology to discover and develop small molecule therapeutics. Our research facility is located 30 miles north of San Diego in Carlsbad, CA. We currently have the following opening:

## Research Scientist

Ph.D. in Enzymology, Biochemistry, Pharmacology or a related discipline with 2-4 years of post doctoral/industrial experience required. This position also requires the ability to characterize the activity of small molecule enzyme inhibitors using enzyme kinetics and other biochemical techniques. The successful candidate will also be expected to develop, validate and automate enzyme assays for high throughput screening of chemical compound libraries. A working knowledge of protein purification is preferred. Excellent written and oral communication skills, flexibility, and the ability to work well in a multi-disciplinary team are also preferred.

Ontogen offers competitive compensation and benefits packages including a stock option plan. Qualified candidates are invited to send or fax resumes to: **Ontogen Corporation, HR-BI02, 6451 El Camino Real, Carlsbad, CA 92009; Fax: (760) 930-0200.** Ontogen is an Equal Opportunity Employer.

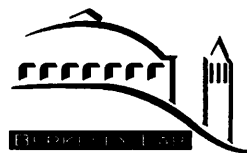
**Ontogen Corporation**

## STAFF PHYSICIST

The Ernest Orlando Lawrence Berkeley National Laboratory seeks a synchrotron radiation experimental scientist to invent new techniques and optical designs for high-brightness x-rays. Responsibilities encompass developing and managing groundbreaking, highly advanced Research and Development (R&D) projects involving sophisticated instrumentation.

Requirements include a Ph.D. or equivalent background in the physical sciences or engineering as well as a broad-based knowledge of synchrotron radiation science and related sophisticated instrumentation. Candidates must have extensive research experience with synchrotron radiation for imaging applications, including initiating innovative R&D programs as well as designing, constructing and operating experimental facilities. Requires proven expertise in optically designing, implementing and employing synchrotron radiation systems in scientific programs. A strong scientific publishing record in synchrotron radiation research is essential.

Please send resume and cover letter to: **Ernest Orlando Lawrence Berkeley National Laboratory, Staffing Office, Job #JSCI/5434, One Cyclotron Road, MS 938A, Berkeley, CA 94720. E-mail: employment@LBL.gov.** Berkeley Lab is an affirmative action/equal opportunity employer committed to the development of a diverse workforce.



## RESEARCH ASSISTANTS

SHAMAN Pharmaceuticals is an innovative and growing company engaged in the discovery and development of novel plant-derived medicines for the treatment of major human diseases.

### NATURAL PRODUCTS - DIABETES

You will design, conduct, and report on isolation procedures leading to gram quantities of biologically active compounds obtained from plant sources. In addition, you will plan and carry out experiments, analyze results, and prepare written reports.

A BS or MS in Organic Chemistry and at least 1-3 years' independent research experience in natural products or compound isolation and purification from complex mixtures are essential. You must have experience with preparative and analytical HPLC systems, NMR, IR, UV, and MS spectrometry. Large-scale compound isolation and purification experience is desired.

### PHARMACOKINETICS AND METABOLISM

You will assist in the development of analytical methods for determining drug levels in biological fluids and analyze plasma samples from clinical and toxicological studies.

A BS or MS in Chemistry, Biochemistry or related field and at least 1-3 years' experience are required. You must have experience with analytical HPLC systems and the analysis of plasma or other biological samples. Experience with *in vivo* studies is desired.

We offer competitive salaries, excellent benefits, and stock options. Please respond to SHAMAN Pharmaceuticals, Inc., Human Resources, Attn.: Job Code: SCI-8.29, 213 E. Grand Ave., So. San Francisco, CA 94080-4812. Or e-mail jobs@shaman.com; Fax: (415) 873-1463. EOE.



## FACULTY POSITIONS IN CANCER RESEARCH

Department of Pharmacology and Cancer Biology  
Duke University Medical Center

The recent merger of the Departments of Pharmacology and Molecular Cancer Biology to create a single Department of Pharmacology and Cancer Biology has resulted in several new faculty positions becoming available to strengthen cancer research efforts. We seek candidates at both junior (tenure-track) and senior (tenured) levels. Successful candidates will be outstanding scientists who have expertise in modern biomedical technologies and wish to apply these technologies to cancer research.

Our current department consists of 20 primary faculty with diverse interests focused primarily in the areas of Neuropharmacology and Cancer Pharmacology. Research strengths related to cancer research include receptor function and cellular signaling mechanisms, as well as regulation of normal and abnormal cell proliferation and death. For additional information on faculty research, visit our homepage at <http://pharmacology.mc.duke.edu>.

Women and underrepresented minority candidates are particularly encouraged to apply.

For full consideration candidates should send their curriculum vitae, a statement of research accomplishments and interests and three or more letters of references by November 1, 1997 to:

**Anthony R. Means, Ph.D., Chairman**  
**Department of Pharmacology and Cancer Biology**  
**Box 3813 DUMC**  
**Durham, NC 27710**

Duke University Medical Center  
is an Equal Opportunity Employer



## University of Notre Dame

### *Faculty Positions in Cell/Molecular Biology, Biochemistry, and Ecology*

Faculty positions are available beginning Fall semester 1998 in the Departments of Biological Sciences and/or Chemistry and Biochemistry. Positions are at various levels. All are tenured or tenure-track.

State-of-the-art animal care and bio-core facilities are available within the College of Science. The newly established Walther Cancer Institute and Transgene Center will potentially interface with many of these new positions.

Notre Dame offers highly competitive salaries and start-up funds, in addition to expanding state-of-the-art facilities. Applicants should submit a curriculum vitae, statement of research and teaching interests and three letters of reference to the appropriate search committee. Applications will be reviewed as received and searches will continue until positions are filled.

The Department of Biological Sciences has excellent research facilities including an optical facility, sequencing, etc. Research programs stress Cell and Molecular Biology; Ecology, Evolution, and Environmental Biology; Comparative Physiology; and Vector Biology/Parasitology. The Department is expanding both in faculty members and in space with a new ecology wing opening June 1998 and other building renovations planned for the near future. Further information on the Department of Biological Sciences is available on the World Wide Web at: <http://www.bio.nd.edu/biology>.

The Department of Chemistry and Biochemistry is well equipped for research in the chemical sciences including representation in biochemistry, organic chemistry, inorganic chemistry, and physical chemistry. Excellent facilities exist for Nuclear Magnetic Resonance, Mass Spectroscopy, and X-ray crystallography, and there are opportunities for interaction with the Notre Dame Radiation Laboratory. The Department has grown recently and has a vibrant faculty. Further information on the Department of Chemistry is available on the World Wide Web at: <http://www.chem.nd.edu/chemistry>.

#### ***The Coleman Chair in Cancer Research***

The Department of Biological Sciences announces a search for an endowed Full Professor appointment to the Coleman Chair. Candidates for this position must have an established scholarly record in the area of cell and molecular biology/genetics as broadly applied to basic experimental cancer research. The successful applicant will participate in the development of the newly established Walther Cancer Institute within the College of Science. More detailed information about this Endowed Chair position may be obtained by contacting Dr. A.L. Johnson, Department of Biological Sciences (e-mail: [johnson.128@nd.edu](mailto:johnson.128@nd.edu)). Applications should be submitted to: Chair, Coleman Search Committee, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.

#### ***The Walther Cancer Institute Junior Chair in Cancer Research***

Applications are invited for the Walther Cancer Institute Junior Chair at the Assistant Professor level in the area of basic cancer research. The appointment of the successful candidate will be in either the Department of Biological Sciences or the Department of Chemistry and Biochemistry as appropriate. Applicants must have a strong commitment to teaching and developing an active research program. Research areas are open, but those that complement existing departmental programs will be most strongly considered. For further information contact Roger Bretthauer (e-mail: [bretthauer.1@nd.edu](mailto:bretthauer.1@nd.edu)). Applications should be submitted to: Walther Cancer Institute Junior Chair Search, Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN 46556.

#### ***Cell/Molecular Biology***

The Department of Biological Sciences invites applications for two tenure-track faculty positions in Cell and Molecular Biology. Applicants with demonstrated experience in any area of cell/molecular biology are encouraged to apply, but we are particularly seeking to complement research expertise in vision research, vector biology/parasitology, and cancer biology. The successful candidates will be expected to establish an active, funded research program. The level of the appointment is expected to be Assistant Professor, but more senior candidates will be considered. Teaching responsibilities will be one course per semester within the graduate and undergraduate cell/molecular biology curriculum. For further information contact Joseph O'Tousa (e-mail: [o'tousa.1@nd.edu](mailto:o'tousa.1@nd.edu)). Applications should be submitted to: Cell/Molecular Biology Search, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.

#### ***Biochemistry/Molecular Biology***

Applications are invited for a tenure-track position in Biochemistry at the Assistant Professor level in the Department of Chemistry and Biochemistry. Applicants must have a strong commitment to teaching and developing an active research program. Individuals with research interests in biochemistry and structural or molecular biology are being sought. Research areas are open, but those that complement existing departmental programs will be most strongly considered. For further information contact Tom Nowak (e-mail: [nowak.1@nd.edu](mailto:nowak.1@nd.edu)). Applications should be submitted to: Biochemistry Search, Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN 46556.

#### ***Ecology***

As part of the Department of Biological Sciences' effort to enhance the strength and scope of the Ecology, Evolution, and Environmental Biology group, we seek an ecologist with a strong quantitative, modeling, and/or ecosystem orientation who will complement our current strengths in aquatic and wetland ecology. Outstanding research facilities include a new ecology wing to the biology building, state-of-the-art analytical equipment in the Center for Environmental Science and Technology, and the University of Notre Dame Environmental Research Center in northern Wisconsin. Teaching responsibilities are typically one course per semester, at either the graduate or undergraduate level, plus a graduate seminar every two years. Level of appointment is anticipated to be Assistant Professor (tenure-track), but more senior candidates will be considered. For additional information contact Gary Lamberti (e-mail: [lamberti.1@nd.edu](mailto:lamberti.1@nd.edu)) or David Lodge (e-mail: [lodge.1@nd.edu](mailto:lodge.1@nd.edu)). Applications should be submitted to: Ecologist Search Committee, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.



## SENIOR SCIENTIFIC MANAGEMENT

*ARIAD Pharmaceuticals, located in Cambridge, Massachusetts, is a leader in the discovery and development of novel pharmaceuticals based on intracellular signaling technology. The company has established highly integrated capabilities in functional genomics, molecular cell biology, structure-based drug design, combinatorial chemistry, high-throughput assays, and pharmacology. ARIAD is seeking highly motivated scientists to direct its dynamic and multidisciplinary research efforts.*

### Vice President - Drug Discovery

Provide scientific and managerial leadership for ARIAD's small-molecule drug discovery program. Coordinate the efforts of a multidisciplinary team of chemists (synthesis, structure, molecular modeling), biologists (molecular cell biology, genetics, biochemistry) and pharmacologists dedicated to the discovery of small-molecule drugs, initially focusing on signal transduction inhibitors for osteoporosis and immune and inflammatory disease. Requires a Ph.D. in biology or chemistry and at least 10 years of professional experience, preferably in a pharmaceutical or biotechnology industry environment. The successful candidate will have well-developed supervisory skills, excellent project management skills and a proven record of completing multidisciplinary drug discovery projects. **Job Code: ST**

## Hoechst-ARIAD Genomics Center, LLC

*The Hoechst-ARIAD Genomics Center, a joint venture between ARIAD and Hoechst Marion Roussel located at ARIAD's corporate headquarters in Cambridge, Massachusetts, employs advanced technologies to analyze gene function with the goal of identifying novel drug targets and therapeutic proteins. The Center combines the resources of one of the largest global pharmaceutical companies with the entrepreneurial environment of a leading discovery research organization to create a preeminent position in the field of functional genomics.*

### Director, Bioinformatics

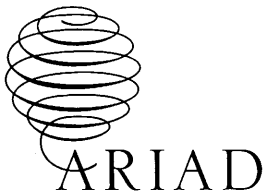
Lead a group responsible for the application of computer technology to genomic analysis and research. Requires a Ph.D. in relevant biological field or a degree in computer science with an understanding of molecular biology and protein structure. Expertise in one or more of the following areas: design and implementation of algorithms for DNA and protein analysis, prediction of protein function, statistical analysis of gene expression, database development and searching methods. Ability to hire and direct a large bioinformatics team. Post doctoral research and at least 5 years of industrial or academic experience.

**Job Code: DB**

### Director, Cell Biology & Genetics

Lead a group responsible for the discovery and validation of genes in cellular and mouse systems. Requires a Ph.D. in relevant biological field. Expertise in one or more of the following technologies: gene trap technology in ES cells, genetic screens using retrovirus-based cDNA libraries, use of dominant negative or antisense technology, cellular differentiation, cellular models of disease. Ability to hire and direct a large team focusing on cell biology and genetics. Post doctoral research and at least 5 years of industrial or academic experience. **Job Code: DCB**

ARIAD offers a highly competitive salary and benefits package, including incentive stock participation. Interested individuals should send a curriculum vitae, referencing the appropriate job code, to: **ARIAD Pharmaceuticals, Inc., Job Code \_\_\_\_\_, 26 Landsdowne Street, Cambridge, MA 02139.** ARIAD is an equal opportunity employer.



## Setting the standards of Quality and Service

### BS & MS SCIENTISTS

Sigma-Aldrich Corporation is the world's largest manufacturer and supplier of research chemicals, bulk chemicals and diagnostic reagents. We are a St. Louis based multi-national, billion dollar corporation which has experienced 16% growth in sales and profits over the past 10 years. We continue to meet the dynamic needs of our scientific customers through science, technology and service.

Positions Available:

#### Quality Assurance/Quality Control Scientist

M.S. in Chemistry or Biochemistry or B.S. with equivalent experience in analytical methods development including enzyme analysis, chromatography, wet chemical and spectroscopy techniques. Position requires excellent communication and problem solving skills.

#### Senior R&D Scientist

M.S. with 2-5 years experience in technology or product development, capable of driving new molecular biology products from concept through commercialization.

#### R&D Scientist

M.S./B.S. with 2-3 years experience in molecular biology research or development support with interest in new product development.

#### Technical Service Scientist

M.S. in Biochemistry with excellent interpersonal and communication skills to support our diverse line of research chemicals. Position offers the rewards of teaching and the challenge of keeping up with current research.

Our benefits package includes one of the best retirement savings plans in the St. Louis area. In addition, you will enjoy the following: excellent relocation package, comprehensive medical, dental, life and disability insurance, non-contributory pension plan and tuition reimbursement. If you are interested, please fax your resume to (314) 286-7863, or send your resume to:

**Sigma Chemical Company**  
Human Resources (AD-97-031-003)  
3050 Spruce Street  
St. Louis, MO 63103  
Visit us on our homepage at:  
<http://www.sigma.sial.com>

Equal Opportunity Employer



### CARDIOVASCULAR RESEARCH SCIENTIST

Applications are invited for an experienced investigator to develop a research group focused on cardiovascular disease at Morehouse School of Medicine (MSM). The individual filling this position must be an established investigator who has received competitive research support, who has leadership ability, and who can develop faculty into an interactive team of investigators studying cardiovascular disease. The successful candidate will create and direct the Cardiovascular Research Center (CVRC), a multidisciplinary, interdepartmental activity that unifies and expands the institution's cardiovascular projects in basic and clinical research; provides training for graduate, medical, and postgraduate candidates; and enhances faculty development. The CVRC director will be expected to encourage collaborative research and training relationships among faculty at MSM and other institutions where current collaborations exist.

Applicants considered for the position must have the M.D., and/or Ph.D. degree and qualify for a position in one of the basic or clinical departments at the level of Associate Professor or Professor.

Morehouse School of Medicine, a private four-year medical school, recognizes the need for minorities to be actively involved in biomedical research related to disorders that disproportionately affect minorities. MSM has over 20 faculty researchers involved in cardiovascular research. Current ongoing research includes basic and clinical studies in the areas of hypertension, heart failure, atherosclerosis, mechanisms of vascular remodeling, effects of altered gravity on the cardiovascular system, preventive and outcomes studies of cardiovascular-related diseases.

Applicants are asked to submit a curriculum vitae, a description of research interests, and three letters of reference to **Sandra Harris-Hooker, Ph.D., Research Scientist Search Committee, Morehouse School of Medicine, 720 Westview Drive, SW, Atlanta, GA 30310. PHONE: (404)752-1768; FAX: (404)752-1103; E-MAIL: hooker@link.msm.edu.**

*Morehouse School of Medicine is an Equal Opportunity Employer.*



## U.S. ENVIRONMENTAL PROTECTION AGENCY

### National Exposure Research Laboratory

The National Exposure Research Laboratory (NERL) is a looking for a world-class individual to provide scientific leadership for its new program in ecological exposure research. This research is critical in developing the scientific underpinnings of EPA's new Ecological Risk Assessment Guideline and its Regional Vulnerability Assessment Project. Ecological exposure involves characterizing and modeling the relationships between the sources, transport, transformation, and fate of pollutants and other stressors (e.g., UV-B or habitat alteration) and the resulting exposures to receptors in terrestrial and aquatic ecosystems at a variety of scales in time and space. The successful candidate will plan and conduct research and communicate the results in professional conferences and peer-reviewed journals; coordinate these research activities with those of scientists in NERL's divisions in Cincinnati, Las Vegas, RTP, and Athens, Georgia, and with other scientists within and outside EPA; and provide technical assistance to EPA program offices, regions, and other governmental organizations at the national and international level.

The permanent, full-time position located in Research Triangle Park, North Carolina, will be in one of the following series: Biologist (GS-401), Environmental Scientist (GS-1301), or Environmental Engineer (GS-819). Applicants should have an **advanced degree in biological sciences, physical sciences, or engineering** and research experience in some aspect of ecological exposure assessment. The appointment will be made at the GS 14 or 15 level (salary range \$63,169 to \$96,594), commensurate with qualifications. Appointments at this level are subject to EPA/ORD peer review policies. *U.S. citizenship is required and candidates must meet U.S. Office of Personnel Management qualification requirements.* Relocation expenses are authorized.

HOW TO APPLY: 1) Current Federal employees, former Federal employees with reinstatement eligibility, or persons with special appointment eligibility may apply through EPA's internal Merit Promotion process by calling our automated Jobline at (919) 541-3014 and leaving a message requesting application materials for the Environmental Biologist/Environmental Scientist/Environmental Engineer announcement # EPA-RTP-97-233. Detailed instructions on required forms are included in the Merit Promotion application materials. The deadline for submitting Merit Promotion applications is November 25, 1997.

2) All other persons must apply through the U.S. Office of Personnel Management (OPM) by calling the OPM automated jobline on (919) 790-2822 or (912) 757-3000; OR accessing OPM via Internet at <http://www.usajobs.opm.gov>, AND requesting an OPM application package for the Environmental Biologist, Announcement AR0912, Environmental Scientist, Announcement #AR0914, Environmental Engineer, Announcement #AR0916. **Requests for complete OPM application materials must be made between August 25, 1997 and November 25, 1997. Application materials requested during this period must be returned to OPM by the date stated on the OPM announcement.**

*EPA IS AN EQUAL OPPORTUNITY EMPLOYER.*

### CMB

#### Faculty Positions

#### The Cell and Molecular Biology Interdisciplinary Research Group at

#### The Albany Medical College

The Cell and Molecular Biology (CMB) Interdisciplinary Group invites applications from qualified candidates for two full-time, tenure-track faculty positions at the rank of Assistant Professor. A Ph.D. or M.D./Ph.D. degree, substantive post-doctoral experience, and a record of publication in quality journals are required. Candidates will be expected to develop an independent, extramurally funded research program and will be free to choose the Academic Department at the Albany Medical College that best suits their interests. Individuals with expertise in molecular mechanisms of eukaryotic cell differentiation, gene regulation, and cytoskeletal biology are especially invited to apply. Competitive salaries, newly renovated laboratory space, excellent core facilities, and start-up packages are available to successful candidates. Applicants should submit a current curriculum vitae with a statement of research interests, and three letters of reference by Oct. 15, 1997 to: **Paul J. Higgins, Ph.D., c/o Ms. Terri Bailey, A-1, Albany Medical College, 47 Scotland Avenue, Albany, NY 12208.**

*Boehringer Ingelheim Pharmaceuticals, Inc., a major international pharmaceutical company, has an opening for a Protein Crystallographer in the Biophysics Group at our state-of-the-art Connecticut Research and Development facility.*

## Protein Crystallographer

We are seeking a scientist with a Ph.D. and post-doctoral experience to independently carry-out all activities required to produce structures of proteins and co-crystal structures for BI North American drug discovery programs. The successful candidate will also be responsible for operating, maintaining and enhancing this facility and will collaborate with multidisciplinary teams of scientists involved in the expression, purification and crystallization of proteins, high-field NMR, computational chemistry, physical biochemistry and medicinal chemistry.

Proven technical capabilities are required in the areas of data collection and macromolecular structure determination, including the ability to conduct experiments at synchrotron facilities. The macromolecular X-ray crystallography laboratory is well-equipped for protein crystallographic studies, including state-of-the-art instrumentation and computational capabilities.

*The Boehringer Ingelheim Pharmaceutical, Inc. Research and Development center in Ridgefield has an established reputation for major achievements in protein crystallography. This is a unique opportunity to build upon this tradition.*

Boehringer Ingelheim Pharmaceuticals, Inc. R&D facility is located on a campus-like setting in a beautiful area of Western Connecticut, bordering New York State. We offer excellent facilities and a supportive and challenging environment. For an opportunity to contribute to our innovative programs, please send your resume and a brief cover letter to: **Boehringer Ingelheim Pharmaceuticals, Inc., Dept. CP-73-97, 900 Ridgebury Road, P.O. Box 368, Ridgefield, CT 06877-0368; email: [cprice@bi-pharm.com](mailto:cprice@bi-pharm.com).**

We are an equal opportunity employer M/F/D/V. As a progressive health care company, we have a smoke-free environment.



## Boehringer Ingelheim

THE WORLD DEPENDS ON THE

Commitment

Of Our Scientists.

Revolutionary new products from a commitment to research excellence.

A commitment to redefining the future of health care. That's Abbott Laboratories, and it's the talent of our professionals that makes us the health care leader we are today. If you're looking for a professional environment built on innovation, take a look at the opportunities available with Abbott's Pharmaceutical Products Division. Currently, we're meeting our commitment with several innovative breakthroughs, and we are seeking the following scientific professionals to join our team.



## DRUG METABOLISM GROUP LEADER (Ph.D.)

The selected individual will be responsible for supervising a group of BS/MS and Ph.D. scientists in designing, conducting and reporting in vitro and in vivo drug metabolism studies in animals and humans. Applicants must have a Ph.D. in Pharmacology, Biochemistry, Medicinal Chemistry or a related field, and at least 6 years of postdoctoral experience in drug metabolism. Experience should include the use of radiolabeled and unlabeled drugs to answer questions of absorption, excretion, protein binding, distribution and biotransformation, as well as the use of in vitro models to predict human drug metabolism and clearance. Strong supervisory, scientific writing, communication and presentation skills are essential. (Job # 97-WKB-2278)

## DRUG METABOLISM SCIENTIST (BS/MS)

The selected candidates will develop and perform HPLC analyses of drugs and drug metabolites in animal and human biological samples. Requirements include a BS or MS degree in Chemistry, Biochemistry or a related discipline and a minimum of 1 year of experience in drug metabolism or analytical research. Candidates must have experience in reverse-phase HPLC analyses, knowledge of HPLC separation science and a willingness to work with small quantities of radioactivity (tritium and carbon-14). Familiarity with HPLC computer data systems, radioactivity flow detection and in vitro metabolism techniques is desirable. (Job # 97-WKB-2181)

With 54,000 employees worldwide and over \$11 billion in annual sales, we've established ourselves as a respected and innovative leader in the health care industry. We offer an outstanding compensation and benefits package, including profit sharing and a stock retirement plan. In addition, we are located in an attractive suburban area approximately 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: Abbott Laboratories, Job # \_\_\_\_\_ (select from above), D583, AP9A(LL), 100 Abbott Park Road, Abbott Park, IL 60064. Abbott is an Affirmative Action Employer/Smoke-Free Environment.

Please visit us on the web at: [www.abbott.com](http://www.abbott.com)

**ABBOTT LABORATORIES**  
Quality Health Care Worldwide

## DIRECTOR, BARRETT CANCER CENTER UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE AND HEALTH ALLIANCE OF GREATER CINCINNATI

The University of Cincinnati College of Medicine and the Health Alliance of Greater Cincinnati seek applicants for the position of Director of The Barrett Cancer Center. The College of Medicine is affiliated with the Health Alliance, an integrated organization of six teaching hospitals and a large group of associated physicians. There are also close academic and clinical ties with other institutions including the Children's Hospital Medical Center and the Veterans Affairs Medical Center.

The Barrett Cancer Center Director will provide leadership in research program development and integration. The Center Director will facilitate application of research advancements to the benefit of patients and their physicians in the Greater Cincinnati area. There is substantial institutional commitment of new laboratory space, clinical research infrastructure, and research start-up funds to support the Director in this endeavor. He/she will report jointly to the Dean of the College of Medicine and to the Senior Executive Officer for Cancer Care of the Health Alliance.

The Barrett Cancer Center Director must be a nationally recognized authority in cancer research and have a history of substantial extramural support for his/her research program. The Director must qualify for appointment as Professor or Associate Professor in a clinical department in the College of Medicine. He/she must have significant breadth of expertise in both basic and clinical research to facilitate their union in the Center. The Director must be able to demonstrate effective leadership ability, interpersonal skills, and financial acumen to enable successful management of a complex organization.

### APPLICATIONS SHOULD BE ADDRESSED TO:

**John C. Winkelmann, M.D., Search Committee Chair**  
The University of Cincinnati College of Medicine  
Office of Faculty Affairs ML-0554  
231 Bethesda Avenue  
Cincinnati, OH 45267-0554

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

## Assistant Chief, Science Policy Research Division Congressional Research Service

Vacancy Announcement #970172  
\$85,073 - \$115,160\*

\*The individual selected for this position will receive the applicable pay adjustment.

CRS, a department of the Library of Congress, provides objective, nonpartisan policy analysis, research and information for the Congress. The person selected for this position will help lead the Division of CRS that is responsible for public policy issues in science, technology and medicine, including biomedical research and applications, civilian and military space, defense research and technology, energy and transportation, global change and earth sciences, public and environmental health, research and development budget policy, and telecommunications and information policy.

Minimum qualifications include one year of specialized experience at the GS-15 level in the Federal service or at a comparable level of difficulty outside the Federal service, and which demonstrates a knowledge of policy issues and government programs in science, technology and medicine and the ability to manage and direct division operations and the work of a diverse staff.

Applicants must obtain a copy of Vacancy Announcement #970172 to apply for this position. The vacancy announcement lists the knowledge, skills and abilities (KSAs) that are required for consideration and must be addressed. For a copy of this announcement and an application form, please call the Library of Congress Employment Office at (202)707-5627 or (202)707-4315. One can also obtain copies by visiting the Library of Congress Employment Office in Room LM-107, 101 Independence Avenue, SE, Washington, D.C., Mon.-Fri., 8:30 a.m. - 4:30 p.m. Applications must be received by October 14, 1997.



**THE LIBRARY OF CONGRESS**

The Library of Congress is an EOE/AA Employer.





**INTROGEN**  
Therapeutics, Inc.  
**RESEARCH SCIENTISTS**

Introgen Therapeutics, Inc. is focused on the development of gene therapeutics for the treatment of cancer. Our strategy is to seek rapid clinical development and regulatory approval of treatments for these life-threatening diseases. Our ongoing clinical trials use p53 gene replacement and K-ras antisense expression to treat lung and head and neck cancers. Interim results of one of our phase I clinical studies have recently been published (see Roth, J.A., et. al., *Nature Medicine* 2(9):985-991, 1996). We are looking for skilled and dedicated scientists to continue this exciting and important work.

**Scientist/Sr. Scientist—Pre-clinical Models**

The successful applicant will head a small team (1-2 individuals) in testing candidate constructs in animal models. We seek an individual with a Ph.D. plus a minimum of 3 years of relevant experience who can design, execute, and analyze *in vivo* studies focused on anti-tumor effects. This individual must have excellent communication and organizational skills as he/she will interact closely with numerous investigators both within and outside the Company.

**Scientist/Sr. Scientist—Cancer Gene Therapy**

We have established a new program to perform pre-clinical studies on novel tumor suppressors. We seek bench scientists with familiarity and experience of established laboratory procedures in cancer cell biology and apoptosis (e.g., cell cycle analysis, the application of gene therapy to apoptosis monitoring, kinase assays, etc.). This individual will function as part of an interdisciplinary team to design and implement *in vitro* and *in vivo* studies to evaluate novel anti-tumor agents. This candidate should have a Ph.D. with relevant experience to design, execute, and analyze *in vitro* and/or *in vivo* studies focused on anti-tumor effects. Position will be commensurate with experience. This individual must have excellent communication and organizational skills, as he/she will interact closely with numerous investigators, both within and outside of the company.

We are a young, enthusiastic, rapidly growing company located in Houston, TX, near the Texas Medical Center, one of the largest medical centers in the world. We have a modern, spacious research facility, and a positive work environment. Introgen offers an attractive salary and benefits package commensurate with the expected contribution.

Send or FAX your résumé and research summary to:

**Human Resources**

**Introgen Therapeutics, Inc.**

**8080 N. Stadium Dr., Suite 1200**

**Houston, TX 77054**

**FAX 713.797.9913**

*Please specify the position for which you are applying.*

**Signal Transduction in Cellular Differentiation,  
Proliferation, and Death**

**A Symposium at the University of Iowa College of Medicine  
Supported by the University of Iowa Howard Hughes Medical  
Institute Research Program Award  
November 13, 1997, Iowa City, Iowa**

**Joan Heller Brown, Ph.D.** Professor, Department of Pharmacology, University of California at San Diego, La Jolla, California: "G-Protein Coupled Receptors Signal through Ras and Rho-Mediated Pathways"

**Gerald R. Crabtree, M.D.** Professor of Pathology and Developmental Biology, Investigator, Howard Hughes Medical Institute, Stanford University, Stanford, California: "The Calcium/Calmodulin/NF-AT Signaling Pathway in Development and Cell Proliferation"

**Vishva M. Dixit, M.D.** Director, Molecular Oncology, Genentech, Inc., South San Francisco, California: "Identification of Components of the Cell Death Pathway"

**Gary L. Johnson, Ph.D.**, Professor, National Jewish Center for Immunology and Respiratory Medicine, Denver, Colorado: "MEK Kinase-Regulated Signal Transduction"

**Arthur Weiss, M.D., Ph.D.**, Ephraim P. Engleman Distinguished Professor of Rheumatology, Investigator, Howard Hughes Medical Institute, Department of Medicine, University of California, San Francisco, San Francisco, California: "Signal Transduction During Antigen Recognition"

To register for this free symposium please contact:

**HHMI Symposium Coordinator, Nancy Davin,  
200 CMAB, The University of Iowa, Iowa City, IA 52242**

**Phone: 319/353-5674; Fax: 319/335-8318;**

**E-mail: nancy-davin@uiowa.edu**

**Sales and Marketing  
Vice President**

You will distinguish yourself with a readily recognizable ability to analyze problems and implement solutions. This is an opportunity where leadership-by-example will be required. Demonstrated track record in both sales and marketing management, preferably in a \$50 million+ company; demonstrated track record in new product introduction; knowledge of life sciences/immunoassay technology; and the ability to manage a budget required. Experience in strategic planning, familiarity with environmental/agricultural market, and small and large corporate experience a plus.

**Immunoassay  
Development Scientist**

The role of this individual will be to act as a principle investigator to develop novel immunoassays for a diverse array of applications. You will supervise and direct the activities of 0-3 technicians and be responsible for all phases of immunoassay research, development, and transfer to manufacturing. The equivalent of a Ph.D. and 0-4 years relevant experience, including experience developing immunoassays, and strong communication skills are required. Familiarity with various immunoassay formats, direct experience with rapid one-step formats, and industrial experience in immunoassay product development preferred.

**Immunoassay Market  
Manager**

This individual will be responsible for all marketing aspects of several existing and emerging antibody and immunoassay related programs. Qualified candidate will possess an advanced degree and/or at least 10 years experience within the antibody and immunoassay biotechnology field; will have demonstrated exceptional project management, communications and decision making skills; and will have the ability to handle multiple priorities and produce results on a scheduled basis within budget.



*in Newark, DE, a  
rapidly growing public  
company that provides  
antibodies and  
immunoassays  
for industrial,  
environmental,  
and agricultural  
applications, has  
the following  
opportunities available.*

If qualified and interested,  
please contact:

**Strategic Diagnostics Inc.  
Human Resources  
128 Sandy Drive  
Newark, DE 19713  
(302) 456-6789  
Fax (302) 456-6770**





## TODAY'S OPPORTUNITIES LEAD TO TOMORROW'S BREAKTHROUGHS



Pharmacopeia, Inc. is a dynamic biopharmaceutical drug discovery company that applies innovative technologies to chemical synthesis of libraries of small molecules and to high throughput screening.

Our goal is to identify small molecules from these processes and to characterize them in the drug optimization process.

Pharmacopeia has exciting opportunities in our growing company:

### SYNTHETIC ORGANIC/ MEDICINAL CHEMISTS

We are seeking talented Chemists with a Bachelor's or Master's degree in chemistry to join our research team. We offer a dynamic research environment and the opportunity to contribute significantly to the growth of the company.

Pharmacopeia is located in Princeton, NJ, an area known for its excellent educational and cultural environment. We offer a highly competitive compensation package which includes stock options and an excellent benefits package. Please send your resume and salary requirements to:

**Pharmacopeia**  
**Attn: Human Resources**  
**Job Code: CP-BMCS**  
**101 College Road East**  
**Princeton, NJ 08540**  
**Fax: 609-452-2434**



**PHARMACOPEIA**

EOE M/F/D/V

## The Science of Agricultural Genetics

### POST-DOCTORAL ASSOCIATE Discovery Research (Job #GT-801)

Post-doctoral position in molecular physiology is available immediately to head an investigation directed toward understanding plant productivity using transgenic approaches. Target areas include photosynthesis, photosynthetic carbon reduction and assimilate partitioning. The candidate should have experience in metabolic engineering and analysis of metabolism and related physiology. Experience with gas-exchange analysis is a plus. Good communication skills are essential, as the candidate is expected to present and publish research findings. This position requires a Ph.D. in molecular biology/biochemistry, physiology or a related field. Review of applications will begin immediately.

Pioneer offers an opportunity to interact among hundreds of scientists with diverse backgrounds. We offer competitive salaries and excellent, comprehensive benefits. Des Moines is a prospering heartland city that ranks well above the national averages in affordability and education. Our location provides a mix of beautiful open spaces and city life advantages. For confidential consideration send 3 copies of your resume and cover letter indicating job number by September 19, 1997 to: Pioneer Hi-Bred International, Inc., Attn: PERSONNEL (Job #GT-801), P.O. Box 1004, Johnston, IA 50131-1004.

Pioneer Hi-Bred International, Inc., is the world leader in agricultural genetics. Founded in 1926, we are a publicly held company that invests more than \$115 million in research and product development. Pioneer brand products are grown in almost every crop-producing continent in the world. At our headquarters in Des Moines, Iowa, we're adding to our Research team.



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

*An Equal Opportunity  
Employer*



### TENURE TRACK ASSISTANT PROFESSOR Developmental Biologist

The Department of Molecular Biology and Pharmacology at Washington University School of Medicine is recruiting individuals at the level of Assistant Professor on the tenure track. We are seeking an outstanding scientist working in the area of developmental biology. Special emphasis will be given to research involving systems where genetic tools can be used to address fundamental questions dealing with development. Faculty in the Department of Molecular Biology and Pharmacology utilize a broad range of organisms including yeast, *C. elegans*, *Drosophila*, and mice to investigate cell fate specification, pattern formation, and the regulation of cell proliferation, differentiation, migration, and death. (Visit our web site at <http://pharmdec.wustl.edu>.)

Interested applicants should forward a curriculum vitae and a short summary of research plans to:

Search Committee (c/o Jeffrey I. Gordon, Head)  
Department of Molecular Biology and Pharmacology  
Washington University School of Medicine  
660 South Euclid Avenue, Box 8103  
St. Louis, Missouri 63110

Applicants should also arrange to have three letters of recommendation sent to the same address.

*Washington University is an Affirmative Action/Equal Opportunity Employer committed to increasing the representation of women and minority groups on its faculty.*

## CONFERENCE

University of  
**Massachusetts** Amherst

### Presents the 12th Annual Conference on **Contaminated Soils**

Analysis, Site Assessment, Fate, Environmental and  
Human Risk Assessment, Remediation and Regulation

**October 20-23, 1997**

• 90 Posters

• 10 Workshops

• 80 Presenters

• 35 Exhibitors



#### Workshops Include:

- Demonstration of the TPH Criteria Working Group
- Introduction to Probabilistic Risk Assessment Methods
  - Desktop GIS - Environmental Data Management
  - Environmental Fate of Hydrocarbons
  - Probabilistic Risk Assessment Methods
- Risk-Based Soil and Groundwater Cleanup Featuring  
SESOIL and AT123D for Windows
- Risk-Based Closure of Sites Impacted by Diesel Fuel
  - Regulatory Risk Assessment
  - Phytoremediation
- Remediation by Natural Attenuation

#### Sessions Include:

- Federal • Railroads • Radionuclides • Sediments
- RBCA & Cleanup Standard • Analysis • Brownfields
- Heavy Metals • Environmental Fate/Site Assessment
- Innovations • Phytoremediation • Risk • Remediation

For More Information Contact The Conference Directors:

Edward J. Calabrese, Ph.D. or Paul T. Kostecki, Ph.D.  
Tel: (413) 545-2934 Fax: (413) 545-4692

## STEM CELL BIOLOGIST

The Blood Center of Southeastern Wisconsin, an internationally recognized leader in blood related research and diagnostic laboratory testing, is developing a new endeavor in Stem Cell Biology. Our vision for a strong, nationally competitive program includes the integration of an outstanding basic research program, state-of-the-art clinical laboratory testing, and a close partnership with our hospitals, physicians, and academic programs. Two functional areas have been identified: One will involve basic research in areas broadly related to the cell and molecular biology of vascular cells, coagulation, hematopoiesis, signal transduction, molecular immunology, or transplantation. The second position focuses on the direction of the clinical Hematopoietic Stem Cell Processing Laboratory, which supports an autologous peripheral blood stem cell transplant program. *While we envision that these areas will require recruitment of two individuals, outstanding candidates with interest in building a program that covers both activities are especially encouraged to apply.*

Qualified research applicants will hold a Ph.D. or M.D. degree(s), will have national grant support, and will have research interests in stem cell biology, especially mechanisms of *ex vivo* self-renewal or directed differentiation. Qualified Director candidates will have a Ph.D. or other advanced degree and experience in one or more of the following areas: cell culture, cryopreservation, flow cytometry, cord blood banking, and stem cell phenotyping, processing, and preservation.

Significant opportunities exist for close affiliation with the Bone Marrow Transplant Program at the Medical College of Wisconsin and other regional autologous transplant programs.

Interested individuals should send a CV with a cover letter explaining current career goals, research interests, and expertise, along with the names of three references **no later than 31 October 1997** to:

**Stem Cell Search Committee**  
**Human Resources—#97-0648/0760**  
**The Blood Center of Southeastern Wisconsin**  
**P.O. Box 2178**  
**Milwaukee, Wisconsin 53201-2178**



**The Blood Center**  
of Southeastern Wisconsin

Please see our Website: [WWW.bloodctrwise.org](http://WWW.bloodctrwise.org)

*AA/EOE minorities and women are encouraged to apply*



**St. Jude Children's  
Research Hospital**

ALSAC • Danny Thomas, Founder

## POSTDOCTORAL RESEARCH POSITION

### HIV Pathogenesis/ Human Gene Therapy

An immediate opening is available for a recently graduated postdoctoral fellow to conduct research in the areas of HIV pathogenesis (analysis of Nef function) and/or human gene therapy (development of lentivirus-based gene transfer systems). A strong background in molecular and cell biology substantiated by peer reviewed publications is essential. Knowledge in cell signaling, modern protein purification techniques and/or retrovirology would be beneficial.

For consideration, please submit a current CV, a list of publications, and the names and addresses of three references to: Dr. J. Victor Garcia, Associate Member, Dept. of Virology and Molecular Biology, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis, TN 38101. *An affirmative action/equal opportunity employer. We provide a smoke free environment.*



## LABORATORY/BRANCH CHIEF IMAGING SCIENCES

National Institutes of Health

National Institute of Neurological Disorders and Stroke

The Division of Intramural Research of the National Institute of Neurological Disorders and Stroke (NINDS) invites nominations and applications for the position of Chief of a newly created research group. We are seeking exceptional, established candidates to direct an independent research program in the study of the normal and diseased brain function using imaging techniques. This program should include a cerebral magnetic resonance imaging/spectroscopy research program to take advantage of the NINDS In Vivo NMR Center facilities which consists of 1.5T state-of-the-art clinical scanner as well as a 4.7T and 2.0T animal systems. In addition, a 3T brain scanner will be available in a cooperative project with NIMH. Research time on other specialized 1.5T systems as well as a 4T whole body system will be available. Interaction with the extensive imaging program in the Clinical Center (including PET, CT etc.) and other NIH programs will be encouraged. In addition to the Chief's research program, space and resources exist in the Branch for the recruitment of 3 tenure-track individuals who would establish independent but complementary research programs. Salary will be commensurate with the qualifications and experience of the candidate.

Applicants should send curriculum vitae, bibliography, statement of research interests, and names of three references to: **Dr. Robert Balaban c/o Chris Steyer, Building 31/Rm. 8A23, NINDS, 31 Center Drive, MSC-2540, Bethesda, MD 20892-2540.**

Applications should be received by October 31, 1997.

*NIH is an Equal Opportunity Employer*



## POSITIONS OPEN

### A PROGRAM IN BIOPOLYMER ENGINEERING

The Department of Food Science and the Department of Plant Breeding have established a collaborative program to explore the production of novel biopolymers. Three Postdoctoral Associates are being sought to complement a core group of scientists engaged in the genetics, microbiology, and biochemistry of biopolymers. A multidisciplinary team approach is being pursued to generate industrially valuable biopolymers. An initial one-year appointment with continuing annual renewals will be offered. All positions require a Ph.D. or the equivalent in the broad fields of biology or chemistry.

#### MOLECULAR BIOLOGIST

This candidate will have command of the requisite recombinant DNA skills to clone and express genes involved in biopolymer synthesis. Demonstrated abilities in these techniques is required.

#### MICROBIAL ECOLOGIST

This candidate will have experience in molecular methods for exploring microbial communities and defining their biosynthetic abilities. Experience in characterizing diverse ecological niches is desired.

#### BIOCHEMIST

This candidate will have a knowledge of methods to purify and characterize components in multi-enzyme synthetic pathways. Some experience in organic synthesis and/or instrumental analysis (i.e., GCMS) would be valuable.

To apply for a position, please submit your curriculum vitae and a list of three references to either:

**Carl A. Batt**  
312 Stocking Hall  
Cornell University  
Ithaca, NY 14853 USA  
FAX: 607-255-8741  
E-mail: cab10@cornell.edu

or  
**John Steffens**  
415 Bradfield Hall  
Cornell University  
Ithaca, NY 14853 USA  
FAX: 607-255-6683  
E-mail: jcs15@cornell.edu

**RESEARCH SCIENTIST—DIRECTOR OF PERINATAL RESEARCH.** Winthrop-University Hospital, a 591-bed teaching hospital affiliated with SUNY at Stony Brook School of Medicine, has an excellent opportunity available in the Department of Obstetrics and Gynecology, for a Neuroscientist to direct basic research in a fully funded laboratory. The current focus is to investigate molecular mechanisms and possible prevention of fetal brain injury. Individuals interested in this position must have a Ph.D. and be considerably experienced in neurochemistry and molecular biology. Preference will be given to individuals with experience in the fields of the N-methyl-D-aspartate (NMDA) receptor, oxygen free radicals, and apoptosis. The candidate should be eligible for the academic rank of an Associate or Assistant Professor position.

We offer a competitive salary (commensurate with candidate's qualifications) and flexible benefits program. For consideration, please send your curriculum vitae and three letters of recommendation to: **Dev Maullik, M.D., Ph.D., Professor and Chairman, Department of Obstetrics and Gynecology, 259 First Street, Mineola, NY 11501. FAX: 516-742-7821. Equal Opportunity Employer.**

### POSTDOCTORAL POSITIONS THE ROCKEFELLER UNIVERSITY

Positions are available for the study of DNA replication mechanisms in prokaryotes and humans. The project areas include: biochemical mechanisms underlying activation of replication origins; coordinated multiprotein actions during propagation of replication forks; and roles of DNA replication proteins in DNA repair. Applicants should have a Ph.D. and a strong background in biochemistry and molecular biology. Please forward a career goals statement, curriculum vitae, and three reference letters to:

**Mike O'Donnell**  
Laboratory of DNA Replication  
The Rockefeller University  
1230 York Avenue  
Box 228  
New York, NY 10021

Equal Opportunity Employer.

## POSITIONS OPEN

### SENIOR RESEARCH SCIENTIST TULANE UNIVERSITY MEDICAL CENTER Tulane Regional Primate Research Center

The Tulane Regional Primate Research Center (TRPRC) of Tulane University is seeking a full-time Senior Research Scientist (ASSOCIATE or FULL PROFESSOR equivalent) to establish a research program focused on the virological, cellular, and molecular aspects of Simian Immunodeficiency Virus (SIV) pathogenesis and vaccine development, and to collaborate with others in new and ongoing SIV-related projects. Highly qualified young investigators will be considered. The TRPRC has conducted SIV research for over 12 years and offers excellent laboratory facilities for tissue culture, cell and molecular biology and immunology, computer support including a Sun Sparkstation, access to rhesus monkeys and other nonhuman primates, containment housing for 500 SIV-infected monkeys, nursery facilities, experienced support staff (including laboratory and animal care technicians, a reproductive physiologist, veterinarians, and veterinary pathologists), as well as other support facilities such as flow cytometry, clinical laboratory, and electron microscopy. The required qualifications are either a Ph.D., M.D., or D.V.M. degree or equivalent, demonstrated ability to collaborate with others, and a record of research productivity, funding, and publication in SIV-related research. Review of applications will begin October 1, 1997, and will continue until the position is filled. Applicants should submit a résumé and the names of three references to: **Gary B. Baskin, D.V.M., Chair, Search Committee, Tulane Regional Primate Research Center, 18703 Three Rivers Road, Covington, LA 70433, USA. Tulane University is an Affirmative Action/Equal Opportunity Employer.**

### HERPETOLOGIST THE UNIVERSITY OF KANSAS

The Natural History Museum and Department of Systematics and Ecology invite applications for an open-rank Faculty-Curator in herpetology. Successful applicant will serve as museum curator in the Division of Herpetology and as faculty member in the department, will be able to teach reptile biology and other courses, direct undergraduate and graduate research, and have an active, specimen-based research program with potential for extramural funding. Preference given to individuals who specialize in reptile biology, conduct herpetological field studies, have a strong commitment to research and education at undergraduate and graduate levels, and show commitment to service to the discipline, and evidence of administrative skills and ability to interact with the public. Submit curriculum vitae; statements of (1) teaching philosophy, experience, and interests, including preferred courses to teach, (2) research interests, goals, and current research activities, and (3) curatorial philosophy and experience, including perceptions of the roles of systematic collections and museums in biological pursuits; two copies of selected publications or manuscripts; and names, addresses, telephone and FAX numbers, and e-mail addresses of three references. Forward materials to: **Dr. Linda Trueb, Chair, Search Committee, Natural History Museum, The University of Kansas, Lawrence, KS 66045-2454, USA. Review of applications will begin 1 September 1997 and continue until the position is filled. Position availability is contingent on budgetary approval. The University of Kansas is an Equal Opportunity Employer.**

### GEN-PROBE

Gen-Probe, a pioneer and leader in the DNA probe-based diagnostics field, is currently seeking the following highly motivated professional:

#### RESEARCH SCIENTIST

Under minimal supervision, individual will assume a key role in the current research projects related to hybridization, amplification, detection, and mutational analysis technologies. This will include designing and interpreting experiments, developing new strategies and concepts to meet project goals, and research literature.

Requires a Ph.D. in chemistry, biochemistry, or related field with at least one to two years of experience. Proficiency in nucleic acid chemistry, biochemistry, and related techniques a must. Experience in structural/analytical chemistry, protein biochemistry, and molecular biology as well as supervisory and computer skills are a plus.

Qualified candidates should send a résumé to: **Gen-Probe Incorporated, HR Department/Ref. #G97/81, 10210 Genetic Center Drive, San Diego, CA 92121. FAX: 619-410-8001. Gen-Probe supports a drug-free work environment. We are an Equal Opportunity Employer.**

## POSITIONS OPEN

### CO-DIRECTOR, INTERDIVISIONAL RESEARCH INSTITUTE IN THE PHYSICAL AND BIOLOGICAL SCIENCES AND PROFESSOR IN THE PHYSICAL SCIENCES DIVISION

The University of Chicago

The Physical Sciences Division at the University of Chicago announces a search for the first co-Director of a new Interdivisional Research Institute that will focus on fundamental problems at the biological and physical sciences interface. The mission of the multidisciplinary Institute is to develop technologies and elucidate principles aimed at establishing the central physicochemical basis for how biological form translates into chemical signaling and function and how macromolecules self-assemble into cells and tissues.

Areas of emphasis in the Institute may include (but are not limited to): structural biology, novel spectroscopies, advanced microscopies, and nanomechanics; protein engineering and design; theoretical and computational biology, information processing, and bioinformatics; time-resolved electronic excitation of biomolecules; synthetic and genetic modification of biomolecules and molecular complexes.

We seek candidates with demonstrated leadership in multidisciplinary research on significant biological problems.

Appointment as co-Director would be for an initial five-year term, and would be accompanied by a tenured faculty position as Professor in one of the Departments of the Physical Sciences Division (including Chemistry, Computer Science, Mathematics, Physics, and Statistics). The successful candidate would work with his or her counterpart co-Director from the Biological Sciences Division, with an external advisory committee, and with the above-mentioned departments in the University to recommend faculty appointments to build the Institute.

Applications and nominations should be sent to: **Office of the Dean, Physical Sciences Division, The University of Chicago, 5747 South Ellis Avenue, Chicago, IL 60637** and should be received by November 1, 1997.

The University of Chicago is an Equal Opportunity Affirmative Action Employer.

### SCIENTISTS—WEST COAST PROTEIN LAB "ON A CHIP"

Ciphergen Biosystems, Inc. has a patented powerful new molecular recognition system for gene expression research at the protein level. We specialize in functional genomics and are destined to be the leading provider of technology to elucidate nanoscale molecular recognition events. We are seeking Ph.D. Scientists with excellent communication and interpersonal skills, who would like to lead collaborations with multiple Biotech clients to enable the use of this cutting-edge technology. Applicants must have a background in biochemistry, cell and molecular biology in the fields of immunology, virology, endocrinology, toxicology, or cancer research. The ideal candidate must excel in protein-based assay development for biospecific recognition events for receptor ligand interactions. The position requires travel and a desire to be an integral part of a fast-growing organization. We offer a competitive salary with stock options.

Please contact: **Mary Hill, Program Manager, Ciphergen Biosystems, Inc., 490 San Antonio Road, Palo Alto, CA 94306. FAX: 415-424-1651.**

### NMR FACILITY MANAGER

The Division of Biological Sciences at the University of Chicago invites applications for Manager of NMR spectrometers in a new Magnetic Resonance Spectroscopy User Facility for multidimensional NMR spectroscopy of biomacromolecules. Applicants should have a Ph.D. with experience in the use of NMR spectrometers and a working knowledge of multidimensional NMR and design of pulse sequences. Responsibilities will include instrument maintenance and instruction of NMR methods at all levels. It is expected that the Manager will interact with user groups to facilitate research. The successful applicant will have the opportunity to develop innovative NMR methods for which spectrometer time will be made available. The 12-month salary will be highly competitive and commensurate with experience. Applicants should send curriculum vitae, list of publications, and copies of salient publications and arrange to have three letters of reference forwarded to: **Professor Michael A. Weiss, Department of Biochemistry and Molecular Biology, 290 East 58th Street, Chicago, IL 60637** by October 1, 1997. Affirmative Action/Equal Opportunity Employer.



Symyx Technologies, located in Silicon Valley, is a well-funded young company pioneering the emerging field of combinatorial materials science. We seek highly motivated Ph.D. level Chemists to synthesize compound libraries for high-throughput automated screening to discover new materials.

### **Organic Chemists**

Familiarity with solid-phase combinatorial techniques and organometallic chemistry preferred.

### **Polymer and Organic Chemists**

Familiarity with organic synthesis, polymer synthesis, device fabrication or organic formulation preferred.

### **Inorganic Chemists**

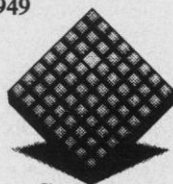
Familiarity with high-temperature and solution-phase synthesis, sol-gel chemistry, and oxide materials and films.

### **Mechanical Designer/Drafter**

Work on the development of new experimental devices and techniques for automated materials screening and evaluation. Five or more years' experience with detailed, hands-on mechanical designs and mechanisms, robotics, vacuum systems and/or precision material dispensing preferred.

Symyx offers competitive salary and benefits, including stock options. EOE. Please send resume to:

Human Resources  
Symyx Technologies  
420 Oakmead Parkway  
Sunnyvale, CA 94086  
E-mail: [hresources@symyx.com](mailto:hresources@symyx.com)  
Fax: 408/732-3949



**Symyx  
Technologies**

## **Postdoctoral Fellows Skin Biology Research Center**

**T**he Skin Biology Research Center of Johnson & Johnson, CPWW, is committed to finding new insights and targets for drug discovery through the application of leading-edge research. Currently, we are in search of TWO Postdoctoral Fellows to join our research group involved in identification and regulation of genes involved in skin physiology, aging and disease.

One project studies the epithelial-mesenchymal interactions that regulate the hair growth cycle. The other project examines the regulation of skin aging and homeostasis by endogenously synthesized nuclear receptor ligands. The candidates will work with senior level scientists using cell and molecular biological approaches, both in vitro and in vivo.

Requirements include a Ph.D. in the biological sciences, demonstrated skills in molecular biology, and the ability to compose reports and scientific papers. Valuable assets include experience with cell biological and protein analytical methods, willingness to work with laboratory animals, and good communication skills.

We offer a competitive salary, comprehensive benefits, and the opportunity to work in a challenging, exciting, and supportive environment — one that strives for excellence and is recognized for its expertise in skin biology. For consideration, please send a scannable copy of your curriculum vitae to: Dept. 1539, Johnson & Johnson Recruiting, PO Box 16597, New Brunswick, NJ 08906-6597. We are an equal opportunity employer and support diversity in the workplace. For additional information or to submit your resume electronically, visit our website at [www.jnj.com](http://www.jnj.com)

**Johnson & Johnson**

A Recipient of the 1996 National Medal of Technology



SEARCH CONTINUED

CHAIR

### **DEPARTMENT OF BIOLOGICAL SCIENCES**

The University of North Carolina at Wilmington (UNCW) invites applications and nominations for the position of Professor and Chair of the Department of Biological Sciences in the College of Arts and Sciences. UNCW is situated on a beautiful, 640-acre campus within 5 miles of the Atlantic Ocean. UNCW currently enrolls approximately 9,000 students and will continue to grow. The Department of Biological Sciences recently occupied a new classroom and laboratory building; a new Marine Science Research facility will soon be constructed. The Department has 35 faculty, over 600 undergraduate majors, and 75 graduate students. The predominant research focus of the faculty is marine biology. The Department offers undergraduate and M.S. degrees in Biology and Marine Biology, an undergraduate degree in Clinical Laboratory Science, and a program in teaching certification in Biology. The Department participates in interdisciplinary programs in Environmental Studies and Environmental Science and is also a partner with North Carolina State University in a joint Ph.D. program in Marine Sciences.

The faculty and administration seek a distinguished scientist with a Ph.D. and an outstanding record of scientific and administrative accomplishments. The successful candidate will have demonstrated exceptional leadership and administrative skills, including the ability to cultivate faculty having diverse interests, mentor students, and work well with administrators. The candidate is expected to strengthen existing areas of teaching and research excellence, promote faculty development, facilitate faculty grant and contract activity, and develop interdisciplinary research and instructional programs. The position will start July 1, 1998. Applicants should send a curriculum vitae, a concise statement of administrative philosophy, a brief description of present and future research and instructional interests, and the names, addresses, and telephone numbers of at least three references to: **Dr. Lawrence B. Cahoon, Chairperson Search Committee, Department of Biological Sciences, UNC Wilmington, Wilmington, NC 28403, Telephone: 910-962-3706 FAX: 910-962-4066; E-mail: [Cahoon@uncwil.edu](mailto:Cahoon@uncwil.edu). The University of North Carolina at Wilmington is an Equal Opportunity/Affirmative Action Employer. Minorities and females are encouraged to apply. Review of applications will begin Sept. 30, 1997.**

## POSITIONS OPEN

### UNIVERSITY OF IOWA DEPARTMENT OF ANATOMY AND CELL BIOLOGY ASSOCIATE RESEARCH SCIENTIST

To perform basic research aimed at developing strategies for gene targeting to airway stem cells for *in utero* gene therapy for cystic fibrosis. The selected scientist will participate in all phases of the project, assuming responsibility for administrative tasks associated with the lab's research grants and personnel, and will be expected to seek external funding. Applicants are required to have a Ph.D. in a field of biological sciences, and to have had several years of progressively independent postgraduate research experience in areas of developmental, structural, and molecular biology. Expertise with fine surgical techniques, cell culture, and histological methods are also required for the project's xenograft airway epithelial model system. Specialized requirements for research include at least reasonable experience in electron microscopy and protein purification. Indication of a track record for independent research in these areas, as evidenced by publications and grant proposals, is necessary. Refer résumé to: **George McHenry, Administrator, the Department of Anatomy and Cell Biology, The University of Iowa, Iowa City, IA 52242-1109. Telephone: 319-335-7756.** The University of Iowa is an Equal Employment Opportunity and Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

### CLINICAL DIAGNOSTICS AND DRUG DELIVERY

**TRANSMEDICA International, Inc.**, an early-stage medical laser company is seeking talented individuals for a number of positions in support of research and marketing of its unique products for use in clinical diagnostics and drug delivery.

Ideal candidates will be self-starters with experience in the medical industry.

### DIRECTOR OF TRANSDERMAL DRUG DEVELOPMENT

**TRANSMEDICA** seeks an experienced product planning and development specialist to direct the development of unique needle-free drug delivery applications. The ideal candidate will have expertise in transdermal drug delivery and/or a strong background in pharmacology. Experience working with a broad range of pharmaceuticals and biologic formulations in an industrial setting is required. Strong skills in project planning and in management are essential.

Résumés to: **Gail Brooks, TRANSMEDICA International, Inc., 323 Center Street, Suite 1100, Little Rock, AR 72201. E-mail: gbrooks@transmedicainc.com.**

*TRANSMEDICA International, Inc. is an Equal Opportunity Employer and does not discriminate in hiring on the basis of race, color, religion, sex, age, disability, or national origin.*

### GRAVITATIONAL BIOLOGY AND ECOLOGY RESEARCH (GB&E) AT NASA'S AMES RESEARCH CENTER (ARC)

Periodically, the Gravitational Research Branch has openings in the new field of GB&E for highly motivated research scientists at any career development stage. GB&E is NASA's research program to determine how gravity affects living processes. We want to build strength in cell and molecular, developmental, organismal, comparative, and evolutionary biology, and gravitational ecology. Scientists having diverse background and interests and experience in a variety of scientific techniques are encouraged to contact: **Dr. Emily Morey-Holton, M/S 239-11, NASA ARC, Moffett Field, CA 94035-1000.** U.S. citizenship is required. NASA is an Equal Opportunity Employer.

### COMPUTATIONAL PHARMACOLOGIST/ STRUCTURAL BIOLOGIST

The Molecular Research Institute invites applications for a Staff Scientist position in computational biology. Qualified candidates must hold a doctoral degree in computational chemistry with a molecular pharmacology and structural biology background. The successful candidate will participate in molecular pharmacology and computational structural biology projects focusing on elucidation of the molecular mechanisms of drug action, construction of 3-D models of receptors, and rational computer-aided drug design. Send résumés to: **Gilda Loew, Molecular Research Institute, 845 Page Mill Road, Palo Alto, CA 94304.** The Molecular Research Institute is an Equal Opportunity Employer.

## POSITIONS OPEN

### POPULATION DYNAMICIST

The Population Dynamics Branch of NOAA's Northeast Fisheries Science Center, Woods Hole, Massachusetts, seeks a Population Dynamicist/Stock Assessment Scientist to conduct research on the effects of exploitation and environmental variability on single and multispecies fisheries. Incumbents should have strong analytic skills as applied to natural resources problems. The Branch is a recognized center of excellence in marine fishery population research and stock assessment, and maintains extensive historical data in a UNIX-based relational computing environment.

*This position is open to all United States citizens through the Office of Personnel Management from August 11 through September 8 under announcement # AR0973.* For an application package call or write the Office of Personnel Management before the closing date of this announcement at: **The Raleigh Service Center, 4407 Bland Road, Suite 200, Raleigh, NC 27609. Telephone: 919-790-2822; website: www.usajobs.opm.gov.**

*As an Equal Opportunity Employer, the Department of Commerce is committed to employing a highly qualified staff that reflects the diversity of our nation.* For additional information, contact: **Ms. Bobby Thorne, DOC/NOAA, EASC, 200 World Trade Center, Norfolk, VA 23510. Telephone: 757-441-6805.**

### UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY POSTDOCTORAL POSITION

The University of Medicine and Dentistry, New Jersey Medical School, Department of Medicine—Division of Infectious Diseases is seeking to fill a Postdoctoral position in a mycobacterial metabolism lab. The lab is characterizing the genes and gene products of essential metabolic pathways (i.e., the *M. Tuberculosis* NAD biosynthesis pathway) with the goal of identifying new drug targets.

Candidates should have a Ph.D. and experience in genetics, molecular biology, or biochemistry. Prior research experience with mycobacteria is desirable. Qualified candidates should forward curriculum vitae to: **Lincoln Miller, M.D., Division of Infectious Diseases, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, 185 South Orange Avenue, MSB-1-509, Newark, NJ 07103-2400.** The University of Medicine and Dentistry is an Equal Opportunity/Affirmative Action Employer.

### CURATORIAL/RESEARCH ASSOCIATE HARVARD UNIVERSITY HERBARIA

The Herbaria seeks a Ph.D. in a field related to systematics of bryophytes or lichens to assist in curating and in the renovation of the collections. This three-year position, to be reviewed annually, is available immediately. The appointee will supervise assistants, assist in collection reorganization, interact with Herbaria staff and visitors, and undertake research based on collections. Selected applicant must have excellent interpersonal skills.

Submit application and names of three references to: **Ms. Mary Reynolds, Department of OEB, 26 Oxford Street, Cambridge, MA 02138.**

Closing date for application is September 15, 1997.

### YALE UNIVERSITY SCHOOL OF MEDICINE

**POSTDOCTORAL POSITION** available to study molecular mechanisms of inflammation in asthma including signal transduction mechanisms in T cells using *in vitro* and transgenic approaches (**Zhang et al., J. Biol. Chem. 272:21597, 1997; Ray et al., J. Biol. Chem. 272:20191, 1997**). Ph.D. with experience in molecular biology and protein biochemistry is required. Please send curriculum vitae and names and addresses of three references to: **Anuradha Ray, Ph.D., Department of Medicine/Pulmonary Section, Yale University School of Medicine, 333 Cedar Street, LCI 105, New Haven, CT 06520.** Equal Opportunity Employer.

### APPLIED MOLECULAR BIOLOGY

The University of Maryland Baltimore County is accepting applications for its unique 12-month M.S. Program in applied molecular biology. Through two hands-on, intensive lab courses, research internship off/on campus, and four companion lecture courses, this comprehensive program prepares students for research positions in industry or academia. Some fellowship assistance is available. Information/applications: **UMBC, Department of Biology, Baltimore, MD 21250. Telephone: 410-455-3669; website: http://www.umbc.edu/biosci.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE** and **POSTDOCTORAL TRAINING OPPORTUNITIES** are periodically available with the College of Biological Sciences at the University of Minnesota. Positions may be available in the Departments of Biochemistry; Ecology, Evolution and Behavior; Plant Biology; and Genetics and Cell Biology. Positions may also be available in the following research programs: the Biological Process Technology Institute, the Lake Itasca Forestry and Biological Station, and the Plant Molecular Genetics Institute. The Research Associate positions are for independent research. To be considered applicants must hold a Ph.D. degree or foreign equivalent and at least two years of postdoctoral experience. Applicants are encouraged to secure salary support from an external granting agency. Multiple positions may be available, depending upon space and facilities, availability of funding, as well as faculty research interests. The postdoctoral training positions require a Ph.D. or foreign equivalent and appointments are limited to three years. Applications must indicate which position is of interest and must include a personal vitae, a brief statement of research interests and experience, and names, addresses, and telephone numbers of three references. Closing date for applications is August 31, 1998. Direct applications to: **Administrator, (Department Name), College of Biological Sciences, 123 Snyder Hall, 1475 Gortner Avenue, St. Paul, MN 55108.** The University of Minnesota is an Equal Opportunity Educator and Employer.

### ASSOCIATE RESEARCH SCIENTIST

Associate Research Scientist to join laboratory January 1998 to study bacterial induction of epithelial signal transduction. At least five years of related experience in epithelial cell biology is required. Experience with characterization of phosphoproteins and protein kinases is essential, as well as a thorough knowledge of MAPK, MEKK, Raf-1, and Ras activation via various pathways including ceramide production from sphingomyelinase. Recent working experience with tissue culture, prokaryotic molecular biology, FACS, and PCR techniques is required. In addition a thorough knowledge of both fluorescence and electron microscopy is essential, with documentation of EM skills necessary. Send curriculum vitae and three letters of reference to: **A. Prince, M.D., Department of Pediatrics, Columbia University, 650 West 168th Street, BB4-416, New York, NY 10032.** We encourage applications from women and minority groups. Affirmative Action/Equal Opportunity Employer.

### DIRECTOR OF NMR FACILITY

North Carolina State University has an immediately available position for Director of the NMR Facility, operated by the Departments of Chemistry and Biochemistry. Responsibilities include supervision of research-level NMR spectroscopists and an electronics technician, oversight of five high field/high resolution spectrometers and two solids spectrometers, UNIX data system administration, general administrative oversight of the Facility, and interaction with users to encourage and facilitate research and improve instrumentation. Participation in collaborative research is expected. Minimum qualifications are a Ph.D. degree with NMR specialization and four years of experience with modern multidimensional NMR techniques. A background in methods development, analysis of macromolecular structure/dynamics, or biological NMR is preferred. Send résumé and three letters of reference to: **Chair, NMR Search Committee, Department of Chemistry, North Carolina State University, Raleigh, NC 27695-8204.** NCSU is an Equal Opportunity/Affirmative Action Employer.

### NIH TRAINING PROGRAM IN REPRODUCTIVE BIOLOGY CENTER FOR STUDIES IN REPRODUCTION THE UNIVERSITY OF MARYLAND

**PREDOCTORAL AND POSTDOCTORAL POSITIONS** are available to study various aspects of female reproduction including: fetal-placental endocrinology (**Eugene Albrecht**), steroid synthesis and action in breast (**Angela Brodie**), mechanisms regulating prolactin secretion (**Karen Gregerson**), ovarian and uterine angiogenesis (**Robert Koos**), mechanisms of brain sexual differentiation (**Margaret McCarthy**) and GABAergic control of GnRH release (**Michael Selmanoff**). Applicants must have U.S. citizenship. Contact either the individual faculty or: **Dr. Eugene Albrecht, Department of Ob/Gyn and Reproductive Sciences, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201. E-mail: ealbrech@ummc001.ummc.ab.umd.edu.**



## MEETINGS

### Current Topics in Gene Expression Systems 1997 Meeting

November 2-5, 1997  
Catamaran Resort Hotel, San Diego, California

The 1997 Current Topics in Gene Expression Systems Meeting will focus on the latest advancements in gene expression technology. The most recent developments in *Pichia pastoris*, *Drosophila*, mammalian, and other expression systems will be discussed. Topics that will be covered include:

- Intracellular, Secreted, and Inducible Expression
- Posttranslational Modifications
- Downstream Processing/Fermentation
- Transgenics

Scientists are encouraged to present their work at the meeting in a oral presentation or poster. **Registration deadline is October 2, 1997.** For more information about registration or abstract submission contact Elizabeth Garon or visit the meeting web site at [www.invitrogen.com/97gene\\_expmtg.html](http://www.invitrogen.com/97gene_expmtg.html).

#### Contact:

Elizabeth Garon  
Phone: (760) 603-7208 / Fax: (760) 603-7201  
e-mail: [bethg@invitrogen.com](mailto:bethg@invitrogen.com)

*This meeting is cosponsored by  
Invitrogen Corporation and  
Research Corporation Technologies*



### AMERICAN SOCIETY FOR MICROBIOLOGY AND NATIONAL CENTER FOR INFECTIOUS DISEASES 1998 POSTDOCTORAL RESEARCH ASSOCIATES PROGRAM

Up to eight associate positions will be awarded by the American Society for Microbiology for full-time research on infectious diseases which cause significant public health problems. Associates will perform research in residence at the National Center for Infectious Diseases (NCID) which is headquartered at the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. In addition to Atlanta, NCID operates laboratories in Ft. Collins, CO, Anchorage, AK, and San Juan, Puerto Rico.

**Eligible fields of study include:** Bacterial and Mycotic Diseases  
Viral and Rickettsial Infections  
Nosocomial Infections  
HIV/AIDS  
Vector-borne Infectious Diseases  
Sexually Transmitted Diseases  
Parasitic Diseases

The associate positions are limited to individuals who either earned their doctorate degree (Ph.D., Sc.D., M.D., D.V.M., or D.D.S.) or have completed a primary residency in May 1995 or later. The program provides an annual stipend of \$30,000, health care benefits package and up to \$4,000 for professional development.

**The application deadline is November 15, 1997.** For more information, visit ASM's home page at <http://www.asmsa.org/edsrc/edu23e.htm> or e-mail: [Fellowships-CareerInformation@asmsa.org](mailto:Fellowships-CareerInformation@asmsa.org). The brochure and application are available on line.

**ASM**  
AMERICAN SOCIETY FOR MICROBIOLOGY

**CDC/NCID**  
CENTERS FOR DISEASE CONTROL AND PREVENTION  
NATIONAL CENTER FOR INFECTIOUS DISEASES

## SYMPOSIUM

### Serono Symposia USA, Inc. Therapeutic Outcome of Endocrine Disorders: Efficacy, Innovation and Quality of Life

November 13-16, 1997  
West Palm Beach, Florida

#### Scientific Chairs

Brian Stabler, Ph.D.  
Barry B. Bercu, M.D.

This symposium will offer a forum for the presentation and discussion of scientific and clinical studies related to the treatment of endocrine disorders. These include growth hormone deficiency, Turner syndrome, constitutional delay of growth, congenital adrenal hyperplasia, and congenital hypothyroidism. Emphasis will be placed on a biopsychosocial perspective from childhood into adolescence and adulthood. Presentations will be made on areas related to the treatment outcomes of each disorder: clinical efficacy of therapy, psychosocial status of the patients, and a synopsis of future needs and developments. Abstracts for brief reports will be invited and presented as posters.

For more information on  
**Therapeutic Outcome of Endocrine Disorders**  
please contact Leslie Nies,  
Serono Symposia USA, Inc.,  
100 Longwater Circle, Norwell, MA 02061  
Telephone 800-283-8088 or 617-982-9000  
FAX 617-982-9481

## PENN STATE



### LIFE SCIENCES CONSORTIUM GRADUATE PROGRAM IN INTEGRATIVE BIOSCIENCES

The Pennsylvania State University's Life Sciences Consortium (LSC) is pleased to announce a new, interdisciplinary graduate program in Integrative Biosciences. This program spans the Colleges of Agricultural Sciences, Engineering, Health and Human Development, Liberal Arts, the Eberly College of Science on the University Park campus, and the College of Medicine in Hershey. The goal of this program is to foster collaborative, innovative research in the life sciences and to provide unique training experiences for graduate students.

#### Options include:

- *Biomolecular Transport Dynamics*
- *Cell and Developmental Biology*
- *Cellular & Molecular Mechanisms of Toxicity\**
- *Chemical Biology*
- *Ecological and Molecular Plant Physiology*
- *Immunobiology\**
- *Molecular Medicine*
- *Neuroscience*
- *Nutrition Sciences*

\*Pending university approval

Fellowships are available to candidates with outstanding credentials. Information and applications can be obtained from the LSC website: [www.lsc.psu.edu/GradEd.html](http://www.lsc.psu.edu/GradEd.html) or from Janice Kennedy, 519 Wartik Laboratory, The Pennsylvania State University, University Park, PA 16802. E-mail address: [lscgradadm@mail.biotec.psu.edu](mailto:lscgradadm@mail.biotec.psu.edu) and phone: (814)865-3155.

*Penn State is an Affirmative Action/Equal Opportunity Employer.  
Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS

The Program on Comparative Genomics has two positions available immediately in livestock molecular cytogenetics and molecular genetics. Candidate must have completed a Ph.D. or foreign degree equivalent by start date. Research includes developing physical assignments for genetic markers using FISH and fiber-FISH and isolation of genetic markers from large DNA inserts that describe QTLs. Salary is commensurate with experience. Prior experience is preferred. Send curriculum vitae that includes the names of three references by October 15th to: **Craig W. Beattie, Ph.D., Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Minnesota, 1971 Commonwealth Avenue, St. Paul, MN 55108. E-mail: cbeattie@tc.umn.edu.**

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

### POSTDOCTORAL POSITIONS MOLECULAR MECHANISMS OF DEVELOPMENT

Two positions are available immediately to study either homeotic gene regulation (see *Science* 264:968, 1994) or mechanisms of TGF- $\beta$  signaling in *Drosophila* (see *Cell* 78:251, 1994; *Cell* 80:899, 1995; *Cell* 81:781, 1995; *Cell* 85:489, 1996). Applicants with experience in protein biochemistry/tissue culture and/or genetics are encouraged to apply. Applicants should send a current curriculum vitae and three letters of reference by November 1, 1997, to:

**Dr. Michael B. O'Connor**  
Department of Genetics and Cell Biology  
University of Minnesota  
1445 Gortner Avenue  
St. Paul, MN 55108

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

### POSTDOCTORAL RESEARCH ASSOCIATE

Research on the molecular basis of protein sorting, trafficking, and assembly into nuclear membranes using baculovirus envelope proteins as a model experimental system. Successful candidate should have training and expertise in molecular and cellular biology or biochemistry: emphasis on candidates with training in membrane protein function, biology/biochemistry. Position could start immediately or within the next six to nine months. Salary negotiable commensurate with experience, starting at \$28,000 annually. Please send résumé and names of three references to: **Dr. Max Summers, Center for Advanced Invertebrate Molecular Sciences, Minnie Belle Heep Building, Room 324, Texas A&M University, College Station, TX 77843-2475. Texas A&M University is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Position available to study viral and host mechanisms in HIV-1 infection. Projects include the role of chemokine receptors a CNS infection (*Nature* 385:645, 1997); mechanisms of neuronal cell death in AIDS (*PNAS* 94:3954, 1997; *JCI* 98:1979, 1996); molecular biology of HIV-1 regulatory proteins (*JBC* 271:10121, 1996). Recent Ph.D. and experience in molecular biology is required. Send curriculum vitae, brief description of research experience, and names of three references to: **Dr. Dana Gabuzda, Dana-Farber Cancer Institute, JF 712, 44 Binney Street, Boston, MA 02115. FAX: 617-632-3113. An Equal Opportunity Employer.**

### POSTDOCTORAL POSITION MOLECULAR HEMATOPOIESIS WHITEHEAD INSTITUTE

Postdoctoral position available to study the molecular biology of normal and leukemic hematopoiesis, with an emphasis on novel gene discovery. Applicants must have a Ph.D. and experience in molecular biology. Please send a curriculum vitae and three references to: **George Daley, M.D., Ph.D., Whitehead Institute, 9 Cambridge Center, Cambridge, MA 02142. FAX: 617-258-5578; e-mail: daley@wi.mit.edu.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

The Department of Molecular Biology, Princeton University invites applications for **POSTDOCTORAL TRAINING POSITIONS** in laboratories of junior faculty.

**Bonnie Bassler:** Genetic and biochemical explorations of the molecular mechanisms that bacteria use for intercellular communication and signal transduction.

**Albert Bendelac:** Molecular and cell biology of CD1, a novel system of MHC class I like genes involved in antigen presentation to mouse and human T lymphocytes.

**Elizabeth Gavis:** Molecular mechanisms of RNA localization and translational regulation and their role in patterning the *Drosophila* embryo.

**Robert K. Ho:** Characterization of maternal molecules localized during early zebrafish development and functional studies on the roles of the zebrafish hox cluster genes in anteroposterior patterning.

**Frederick Hughson:** Biophysical and X-ray crystallographic studies of proteins involved in neurotransmitter release and intracellular transport.

**Yigong Shi:** Structural biology of tumor suppressors involved in signal transduction and cell cycle regulation.

**Joe Z. Tsien:** Molecular and neural analyses of activity-dependent synaptic plasticity and learning behaviors in mouse models utilizing subregion- and cell-type specific conditional gene knockout technology.

**Thomas F. Vogt:** Developmental genetics of mouse mutants and the role of the mammalian *Fringe* gene family in axial patterning, neurogenesis, and disease.

**M. Gerard Waters:** Biochemical and genetic analyses of intracellular protein traffic, with emphasis on the regulation of transport vesicle docking.

Information regarding the Department of Molecular Biology and research interests of the faculty may be obtained by visiting our website: [www.molbio.princeton.edu](http://www.molbio.princeton.edu). Complete applications including a curriculum vitae, three letters of reference, and statement of area of interest should be sent to: **Postdoctoral Training Positions, c/o Lynn Egloff, Personnel Manager, Department of Molecular Biology, Princeton University, Lewis Thomas Lab, Princeton, NJ 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWS** for research group active in gene discovery, genome analysis, and the neurobiology of cognition and behavior.

Must have Ph.D. or M.D. and experience in molecular biology. Creativity and dedication preferred.

Please send curriculum vitae and three reference letters to:

**Dr. J. R. Korenberg (or Alisha Bender—Assistant)**  
Vice Chair of Pediatrics, Research  
Professor of Pediatrics, UCLA School of Medicine  
Cedars-Sinai Medical Center  
110 George Burns Road, Suite 2069  
Los Angeles, CA 90048  
FAX: 310-652-8010  
E-mail: [jkorenberg@mailgate.csmc.edu](mailto:jkorenberg@mailgate.csmc.edu)  
Website: <http://www.csmc.edu/genetics/korenberg/korenberg.html>

**POSTDOCTORAL POSITIONS** available to study the interaction of tRNA, antibiotics, and other ligands with the ribosome as well as to characterize protein-RNA complexes at the molecular level. These interdisciplinary projects include the use of recombinant RNA techniques, site-directed photochemical cross-linking, synthesis of modified ribosomal ligands, and the development of new strategies for analyzing protein-RNA and RNA-RNA cross-links. Salary commensurate with experience. Review of applications begins 1 October 1997 until suitable candidates are identified. Send curriculum vitae and three letters of recommendation to: **Dr. Robert A. Zimmermann, Department of Biochemistry and Molecular Biology or Dr. Stephen S. Hixson, Department of Chemistry, University of Massachusetts, Amherst, MA 01003. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION, HARVARD MEDICAL SCHOOL.** Available immediately. Organic Chemist will synthesize radionuclide carrier molecules as part of a multidisciplinary group examining the diagnostic and therapeutic potential of radionuclides. Salary based on experience. Must be a U.S. citizen or permanent resident. Please contact: **Dr. A. I. Kassir, Goldenson Building, Radiology Department, Room B242, 220 Longwood Avenue, Boston, MA 02115-5729. Telephone: 617-432-7777. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE

A Postdoctoral Research Assistant position is available immediately to work on a project to generate and characterize antibodies against plant cell wall polysaccharides. Phage display technology is being used to select the antibodies directed toward specific carbohydrate epitopes. Applicants must have a Ph.D. in biology or biochemistry and demonstrated experience with PCR and cloning techniques. Experience with phage display technology is desired. Salary based on experience. Send résumé and request that four letters of reference be sent to: **Dr. Michael G. Hahn, University of Georgia, Complex Carbohydrate Research Center, 220 Riverbend Road, Athens, GA 30602-4712. FAX: 706-542-4412; e-mail: hahn@ccrc.uga.edu. An Equal Employment Opportunity institution.**

**POSTDOCTORAL POSITION** available immediately: **CELLULAR or DEVELOPMENTAL NEUROBIOLOGIST.** Study synaptic function, development/remodeling with emphasis on role of Schwann cells at neuromuscular junctions. Strong background in synaptic transmission and/or developmental neurobiology required. Experience in immunocytochemistry, antibody production, protein purification, molecular cloning, video microscopy, electron microscopy, or electrophysiology preferred. Send curriculum vitae, names of three references to: **Dr. Chien-Ping Ko, Neurobiology Program, University of Southern California, Los Angeles, CA 90089-2520.**

### POSTDOCTORAL POSITION BETH ISRAEL DEACONESS MEDICAL CENTER HARVARD MEDICAL SCHOOL

Two Postdoctoral positions are available immediately to study heparan sulfate matrix and endothelial-myocardial cell interaction in the regulation of angiogenesis. M.D. or Ph.D. candidates with the appropriate background, who are eligible for employment in the United States, should send or FAX a cover letter describing research interests, a curriculum vitae, and the names of three references, to: **Dr. Michael Simons, Angiogenesis Research Center, Beth Israel Deaconess Medical Center, 330 Brookline Avenue, Boston, MA 02215. FAX: 617-975-5201.**

### BAYLOR COLLEGE OF MEDICINE

**POSTDOCTORAL POSITION** available immediately to study the role of fibroblast growth factors and their receptors in normal and pathological prostate growth. A strong background in cell and molecular biology is essential. Experience in techniques such as immunohistochemistry, Western and Northern blotting, PCR, *in situ* hybridization, tissue culture, and gene cloning is desirable. Please send curriculum vitae and names and telephone numbers of three references to: **Dr. Michael Ittmann, Houston VAMC, Research Service, 2002 Holcombe Boulevard, Houston, TX 77030. FAX: 713-794-7938.**

**POSTDOCTORAL POSITION** is available immediately to study structure/function of human factor VIII (anti-hemophilic factor) and its interactions with other blood-clotting proteins. Candidates should have a recent Ph.D. in biochemistry or related field, a strong background in protein characterization, and experience in molecular biology. Send curriculum vitae and names of three references to: **Dr. Philip J. Fay, Vascular Medicine Unit, P.O. Box 610, University of Rochester School of Medicine, Rochester, NY 14642. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION IN PHYSIOLOGY/SURGERY—MAYO CLINIC.** Position available immediately in an NIH training grant to study neural regulation of water and electrolyte absorption-secretion. Applicants must have a Ph.D. or M.D. degree with expertise in methods involving Ussing chamber work and *in vitro* transport studies. Applicants must be a U.S. citizen or permanent resident. Send résumé and letters of reference to: **Michael G. Sarr, M.D., Mayo Clinic/Mayo Foundation, GI Research Unit, Alfred Building, Second Floor, 200 First Street S.W., Rochester, MN 55905. Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.**

## Program Leader— Brain Tumor Research

Albert Einstein College of Medicine

The Albert Einstein Cancer Center, in conjunction with the Departments of Neurology and Neuroscience, is seeking a neurobiologist to develop and lead a multidisciplinary research program in neuro-oncology. The neuro-oncology program will build upon the substantial strengths in the Neurosciences and the Cancer Center's interdisciplinary molecular-based research programs. The program will interface with the extensive clinical trials activities in the Cancer Center and the neurosciences with associated data management and biostatistical services. Development of neuro-oncology will be supported by substantial start-up funding and the Cancer Center's extensive shared resources that include, among others, major facilities for mouse genetics research.

The Albert Einstein College of Medicine complex is located in a residential neighborhood in Northeast New York, minutes from Westchester County and in close proximity to Manhattan and Connecticut. Apply to: **Dr. John Kessler, Kennedy Center, Room 903, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. EOE.**

**ALBERT EINSTEIN  
COLLEGE OF MEDICINE**

Toward the  
advancement of medicine  
...and your career



## Graduate Study in Molecular Biology, Biochemistry, and Molecular Biophysics Wesleyan University

Graduate training in an interdisciplinary setting with state-of-the-art facilities that emphasizes academic excellence and close interactions between students and faculty. Our Ph.D. students are supported with research fellowships, including an NIH-sponsored training grant in molecular biophysics. Research programs of the faculty include molecular genetics and biochemistry of DNA replication, protein secretion, DNA repair and the cell cycle, macromolecular nuclear magnetic resonance spectroscopy, heat-shock response and cellular regulation of iron metabolism, optical and vibrational spectroscopy, biophysics of protein-nucleic acid interactions, gene silencing, and computer modeling of biomolecules. Opportunities to teach or supervise undergraduate research are available.

For further information please write to **Graduate Admissions, Department of Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT 06459-0175** or visit our website: <http://www.wesleyan.edu/home/>.



MYRIAD

## TECHNICAL LABORATORY DIRECTOR

*Myriad Genetic Laboratories, Inc.  
Salt Lake City, Utah*

Myriad Genetics, located adjacent to the University of Utah and in the foothills of the Wasatch Mountains, is a publicly-held genomics company focused on the isolation of significant disease-causing genes. Our Clinical Genetic Laboratory, which performs predispositional genetic testing for breast/ovarian cancer, is recruiting for a Technical Laboratory Director.

You must possess a Ph.D. in molecular biology with 4+ years' post-doctoral experience in molecular biology with a strong emphasis in DNA sequencing, robotic automation and new methodology evaluation and implementation.

You will manage the technical aspects of our current DNA sequencing utilizing a miniaturized robotics format.

Additional responsibilities include: end-stage development, maintaining a stable diagnostic production process that meets our exacting quality standards, and close interaction with research regarding new technology assessment and introduction into our laboratory. Depending on management experience, you may manage two supervisors and up to 15 technologists.

A strong biochemical understanding of Automated DNA sequencing, preferably with ABI sequencers is required, as is a basic understanding of the use of robots and automation to assist in high-throughput sequencing and specimen handling. Experience developing diagnostic tests and with technology transfer into a clinical laboratory is also necessary. In addition, you must have appreciation for new methodology evaluation, long range evaluation of tools for future mutation detection, miniaturization of our process and managing the costs of sequencing. Supervisory skills and previous exposure to the rigors of a clinical laboratory are essential.

We offer an attractive compensation package, and a stimulating, interactive environment. Please mail or fax a cover letter, specifying the position you are applying for, a complete resume, and the names of three professional references to: Human Resources Department, Myriad Genetics, Inc., 320 Wakara Way, SLC, UT 84108. Fax: 801-584-3640. EOE.

## Executive Director COMMISSION ON GEOSCIENCES, ENVIRONMENT, AND RESOURCES

The National Research Council (NRC), the principal operating arm of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, a national non-profit, non-government organization located in Washington, D.C., invites applicants for the position of Executive Director of the Commission on Geosciences, Environment, and Resources (CGER). CGER activities include programs that analyze relevant science and technology policy issues. A staff of approximately 55 members supports the work of CGER.

The Executive Director, in cooperation with the CGER Chairman and Executive Board, manages CGER as one of eleven major program units of the NRC, including all scientific, financial, and administrative operations of the unit, subject to the policy directives of the Chairman, Governing Board, and Executive Officer of the NRC. The incumbent plans and oversees the ongoing program of technical activities and studies, supervises staff, and is expected to stay abreast of major developments in the fields of the earth and environmental sciences and natural resources. The CGER Executive Director identifies emerging problems and opportunities for NRC studies and responds to public and private requests for studies and information. The Executive Director serves as a senior member of the leadership team of the NRC, and in addition to other duties, supports the overall vitality and effectiveness of the institution. These activities include joint projects across a range of disciplines, reviews of overall program and managerial effectiveness, and strategic positioning for the future of the organization.

Applicants should have the following qualifications: Ph.D. or equivalent in areas related to environmental science or engineering/geosciences/natural resources and at least ten years experience related to the analysis of policy issues. Substantial leadership experience in program development, policy analysis, and formulation, staff management, and project quality assurance is required. Familiarity with the role of the U.S. government in supporting, contracting for, and using research in areas of science and technology policy, as well as with institutions of higher education and industry, is required. Candidates must demonstrate excellence in teambuilding, human resource management and financial management, and have very effective oral and written communication skills. Please send resume in confidence to: **NATIONAL RESEARCH COUNCIL, Human Resources, GR 146 (CGER-RL), 2101 Constitution Avenue, NW, Washington, DC 20418.** For more information about the NRC, visit us at [www.nas.edu](http://www.nas.edu). An Equal Opportunity Employer.



## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** are available to work on cutting-edge research on biological and clinical importance of LH/hCG receptor gene expression in nongonadal tissues. Candidates with experience in the latest molecular biology techniques are invited to apply. Contact: **Dr. C. V. Rao, Department of Ob/Gyn, University of Louisville, Louisville, KY 40292. FAX: 502-852-0881.**

### PHYSIOLOGICAL STUDY OF SYNAPSE DEVELOPMENT

A **POSTDOCTORAL FELLOWSHIP** position is available to study molecular mechanisms for synapse development and plasticity. Ongoing projects include: (1) role of neurotrophic factors in synaptogenesis and plasticity, (2) characterization of new genes involved in specific stages of synaptogenesis. The candidate will carry out electrophysiological studies using cultured neurons or brain slices, and will learn biochemistry/molecular biology through interacting with molecular biologists in the lab. Experience in electrophysiology and a Ph.D. and/or M.D. degree with less than five years of postdoctoral experience is required. A background in  $Ca^{2+}$  imaging is highly desirable. Interested applicants should send a curriculum vitae and names, addresses, and telephone numbers of three references, and a brief description of research experience and interests to: **Dr. Bai Lu, LDN, NICHD, Building 49, Room 5A38, 49 Convent Drive, MSC 4480, Bethesda, MD 20892-4480. FAX: 301-480-3526; e-mail: lub@codon.nih.gov.**

Applications will be accepted until December 31, 1997. NIH is an Equal Opportunity Employer.

Two **POSTDOCTORAL POSITIONS** are available immediately. One position requires training in Molecular Biology who must possess hands-on experience in producing fusion protein via recombinant DNA approach. Knowledge of gene therapy will be a plus. The second requires training in Biochemistry with bench experience in protein conjugation and enzymology. Laboratory experience with small animals and knowledge of blood coagulation/thrombolysis and immunochemical techniques are desirable for both positions. Please send résumé and names of three references to: **Professor Victor C. Yang, College of Pharmacy, The University of Michigan, Ann Arbor, MI 48109-1065. Telephone: 313-764-4273; FAX: 313-763-2022. The University of Michigan is an Affirmative Action/Equal Opportunity Employer.**

### THE MIAMI PROJECT TO CURE PARALYSIS

**POSTDOCTORAL POSITION** is available in a multidisciplinary research group focusing on the development of neuroprotective interventions for the treatment of acute spinal cord injury. Current research strategies include hypothermia, neurotrophic factors, and pharmacological approaches. Candidates with experience in spinal injury will be given priority. Send curriculum vitae, three references, and cover letter to: **R. P. Yezierski, Ph.D., The Miami Project (R-48), P.O. Box 016960, Miami, FL 33101. E-mail: ryezi@miampiroj.med.miami.edu. The Miami Project is an Equal Opportunity Employer.**

NIH-funded **POSTDOCTORAL POSITIONS** in the Department of Pharmacology at the University of Minnesota are available within four different labs.

**Greg Connell**—mechanism of RNA editing in trypanosomatids. **Duanqing Pei**—cell molecular biology of proteolytic enzymes. **S. Ramakrishnan**—targeting toxin polypeptides to tumor vasculature. **Paul Sammak**—transcriptional control of cell motility during wound healing.

Please send applications addressed to the appropriate lab at: **3-249 Millard Hall, 435 Delaware Street S.E., Minneapolis, MN 55455-0347. Website: <http://brain.med.umn.edu/index.html>.**

**POSTDOCTORAL POSITION.** Ph.D. in molecular biology, biophysics, genetics, or biochemistry. Position available to conduct research on molecular mechanisms of cellular response to oxidative stress in human melanocytes and melanoma cells and its regulation for preventive and therapeutic indications.

Contact: **Dr. Frank L. Meyskens, Jr., Director, University of California-Irvine, Chao Family Clinical Cancer Research Center, 101 The City Drive, Orange, CA 92668. FAX: 714-456-5039; e-mail: flmeyske@uci.edu.**

## POSITIONS OPEN

### UCSF AND GENEMEDICINE CELL AND MOLECULAR 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 cell and molecular biology 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 is 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. E-mail: mclean@itsa.ucsf.edu; FAX: 415-476-4845. UCSF and GeneMedicine are Equal Opportunity/Affirmative Action Employers.**

### POSTDOCTORAL SCIENTIST

Seeking two Ph.D.'s in cellular immunology to investigate the attenuating and adjuvant effects of cytokines on the development of live attenuated SIV vaccines. For reference, consult *J. V.* 70(4):2247-2251, 1996; *J. V.* 71(2):866-872, 1997. The positions require strong skills in cellular immunology of primates and mice, including experience with: analysis of humoral and cellular immune responses to vaccines; quantitative analysis of cytokine gene expression; maintaining T and B cell lines; immuno-phenotyping of cells; radioisotopes, laboratory animals, and human pathogens (SIV, VSV). Salary range \$35,000 to \$42,000. Please forward curriculum vitae and references to: **T. Yilma, VM: International Laboratory of Molecular Biology, University of California, Davis, CA 95616. FAX: 916-752-1354; e-mail: tdyilma@ucdavis.edu.**

**POSTDOCTORAL POSITION** in gene therapy available to begin in 1997 or 1998 in an NIH-funded pediatric arthritis center investigating gene transfer to the joint space in experimental models of arthritis. Experience in molecular biology, biochemistry, or cellular immunology is desirable. Applicants must have Ph.D. or M.D. degree. Outstanding academic environment, competitive salary, and excellent benefits. Send curriculum vitae, summary of research experience, and names and phone numbers of three references to: **Dr. Raphael Hirsch, Division of Rheumatology, Children's Hospital Medical Center, Pav. 2-129, 3333 Burnet Avenue, Cincinnati, OH 45229. FAX: 513-636-4116.**

**POSTDOCTORAL POSITION** available to investigate the molecular pathogenesis of herpes simplex virus/cytomegalovirus infection. Ongoing NIH-sponsored research involves recombinant DNA techniques, vaccine and antiviral drug evaluation, animal model studies, and development of novel strategies to study CMV pathogenesis. Molecular biology experience required. Send curriculum vitae and two letters of reference to: **Mark Schleiss M.D., Division of Infectious Diseases, Children's Hospital Research Foundation, University of Cincinnati, 3333 Burnet Avenue, Cincinnati, OH 45229. E-mail: schlm0@chmcc.org. Equal Opportunity Employer.**

Two **POSTDOCTORAL FELLOWSHIPS** are available in a receptor biology laboratory to investigate molecular mechanisms of T cell tolerance. The candidates must have U.S. citizenship or permanent residency with experience in biochemical and molecular biology techniques. Interested candidates should send their curriculum vitae with names of two references to: **Professor Mark I. Greene, Department of Pathology and Laboratory Medicine, University of Pennsylvania, Philadelphia, PA 19104-6082.**

**POSTDOCTORAL POSITION** to study regulation of cytokine transcription in association with inflammatory bowel disease. Candidates must have a M.D./Ph.D. with experience in molecular biology/immunology preferred. Please send curriculum vitae to: **Stephan Targan, M.D., IBD Center, Cedars-Sinai Medical Center D4062, 8700 Beverly Boulevard, Los Angeles, CA 90048. FAX: 310-652-7168.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Massachusetts General Hospital/Harvard Medical School, Boston. Antibody engineering; molecular biology experience required. Send curriculum vitae, statement of research interests, three reference letters to: **Dr. Michael Margolies, MGH East, 149 13th Street, Box 31, Charlestown, MA 02129. FAX: 617-726-4811; E-mail: margolies@helix.mgh.harvard.edu.**

**POSTDOCTORAL/EDITORIAL ASSISTANT POSITION** available immediately in the Editorial Office of Bergey's Manual Trust. Responsibilities will include gathering taxonomic information from various sources and preparing it for the 2nd Edition of Bergey's Manual of Systematic Bacteriology, as well as extracting data for entry into Bergey's database, routine updating and validation of entries, and copyediting of manuscripts. A doctoral degree in microbiology and a demonstrated background in prokaryotic systematics and phylogeny are required. Fluency in English with strong writing skills and a working knowledge of the rules of biological nomenclature are necessary. Candidates should have a solid computing background and be familiar with various word processors, databases, and online bibliographic and sequence retrieval systems. Prior copyediting experience is desired. Preference will be given to candidates wishing to pursue active research in the field of prokaryotic taxonomy or classification theory, in addition to their assigned duties. Send curriculum vitae and three letters of recommendation to: **Dr. George M. Garrity, Microbiology Department, Giltner Hall, Michigan State University, East Lansing, MI 48824. Michigan State University is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION—MOLECULAR GENETICS OF FOLATE/ANTIFOLATE TRANSPORT.** Studies focus on the cloning and characterization of recently discovered transport routes and regulation of these processes at the molecular level. This is a well-established, NIH-funded laboratory with a highly interactive group of trainees and staff. Applicants should have a strong background in molecular/cellular biology. Excellent communication skills required. Contact: **I. David Goldman, M.D., Director, Einstein Cancer Center, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Channing Two, Bronx, NY 10461. E-mail: igoldman@aecom.yu.edu. Equal Opportunity Employer.**

### TROPICAL ECOLOGY PROGRAM

**POSTDOCTORAL** or advanced Master's degree position available to supervise field research program on drought stress, flammability, and productivity of Amazon forests, including forest rainfall exclusion experiment. Based in Brazil. Portuguese or Spanish required. Expertise in one or more of the following: Granier sapflow, TDR soil moisture, IRGA soil respiration, gas chromatography, LiCor 2000 LAI. Deadline: October 1. Begin winter or spring. Send letter, résumé, and list of three references to: **Tropical Search, The Woods Hole Research Center, P.O. Box 296, Woods Hole, MA 02543. A smoke-free institution.**

NIH-funded **POSTDOCTORAL POSITIONS** available immediately to study molecules involved in cell cycle regulation and tumor suppression. Strong background in molecular biology and biochemistry is desirable. Send curriculum vitae and names of three references to: **Wei Dai, Ph.D., Division of Hematology/Oncology, University of Cincinnati, ML-508, K-Pavilion, 231 Bethesda Avenue, Cincinnati, OH 45267. FAX: 513-558-6703; e-mail: wei.dai@uc.edu. An Equal Opportunity Employer.**

NIH-funded **POSTDOCTORAL POSITIONS** in cardiovascular biology starting immediately. The projects focus on calcium homeostasis and the regulation of cardiac function in transgenic mice using molecular, cellular, biochemical, and physiological techniques. Candidates must possess a Ph.D./M.D. degree and a strong background in either molecular biology, biochemistry, or physiology. Interested candidates should send their curriculum vitae and three references to: **Litsa Kranias, Ph.D., Department of Pharmacology and Cell Biophysics, University of Cincinnati, 231 Bethesda Avenue, P.O. Box 670575, Cincinnati, OH 45267-0575. FAX: 513-558-2269; e-mail: kraniaeg@email.uc.edu.**

## Postdoctoral Fellow Biochemistry



Isis Pharmaceuticals has a strong program in combinatorial chemistry directed toward discovery of new antibacterial agents. A postdoctoral position for a biochemist is available immediately in the drug discovery group. Research will focus on identification of novel targets and development of automated, high throughput assays designed to select inhibitors of protein/RNA interactions. The scientist will characterize interactions between inhibitors and the RNA or protein and will participate in design of targeted combinatorial libraries. The successful candidate will have completed biochemical research on the structure or function of RNA. Strong interdisciplinary skills, including experience in either bio-organic chemistry, biophysical chemistry, or molecular biology are desired.

With strong funding and excellent academic ties, Isis offers a superb environment for professional training, as well as excellent salaries and benefits. We are located in North Coastal San Diego County. For consideration, send your CV, names of three references, and cover letter to: **Isis Pharmaceuticals, Human Resources, Code 245, 2292 Faraday Ave., Carlsbad, CA 92008.** Principals only. No phone calls please. EOE.

**ISIS PHARMACEUTICALS**



## RICE UNIVERSITY Graduate Studies in Science and Engineering

Since Rice opened in 1912, the university has recognized the importance of graduate study and research as a principal means of advancing knowledge. Today Rice's 1400 graduate students are enrolled in Master's and Ph.D. degree programs in the humanities, social sciences, natural sciences, engineering, music, architecture, and business. Rice provides generous support of graduate students through several university fellowship programs.

### George R. Brown School of Engineering

Ph.D., M.S., and Professional Master's Degree Programs in Bioengineering, Chemical Engineering, Civil Engineering, Computational & Applied Mathematics, Computer Science, Electrical & Computer Engineering, Environmental Science & Engineering, Mechanical Engineering & Materials Science, and Statistics

### School of Social Sciences

Ph.D. and M.S. programs in Anthropology, Economics, Political Science, and Psychology

### Wiess School of Natural Sciences

Ph.D. and M.S. programs in Biochemistry & Cell Biology, Chemistry, Ecology & Evolutionary Biology, Physics, Geology & Geophysics, Mathematics, and Space Physics & Astronomy

### Interdepartmental programs

Ph.D. and M.S. programs in Systems Theory, Solid-State Electronics, Materials Science & Engineering, and Applied Physics

### Cooperative Programs with Baylor College of Medicine, University of Houston and University of Texas Medical School

Ph.D. and M.S. Programs in Computational Biology and Biomedical Ethics

### M.D./Ph.D joint degree in several fields

### Program Information

For general information about Rice graduate programs visit our website at <http://www.ruf.rice.edu/~graduate/>. For information on specific programs and application materials applicants should contact individual programs through <http://riceinfo.rice.edu/directory/departments.html>.

### Laboratory

## QUEST DIAGNOSTICS

Innovation, excellence and spirit of teamwork is how we have become a leader in the diagnostic testing industry. We are currently seeking individuals to join our Orange County, California, facility for the following:

### SR. SCIENTIST

Requires M.S. (Ph.D. preferred) with 5+ years of experience in Product Development in Biotechnology/Diagnostics. Synthesis of antigen derivatives, protein modification, conjugate purification, non-isotopic diagnostics product development. Validation of process, technology transfer to operations, solid phase methods development and project management supervision. Code: DX-42-R

### SR. SCIENTIST

Requires M.S. or Ph.D. with 5+ years of experience in protein chemistry, cell culture, and immunoassay development. Through understanding of monoclonal antibody techniques and protein purification/protein chemistry. Primary responsibilities include the development of monoclonal antibodies and immunoassay testing and development. Code: DX-42-H

We offer attractive salaries & comprehensive benefits. To maintain a drug-free workplace, we require pre-employment drug screenings. Please send your resume with salary history to: **QUEST DIAGNOSTICS, Attn: HR/Job Code, 33608 Ortega Hwy., San Juan Capistrano, CA, 92690-6130.** Fax: (714) 728-4781. Jobline: (714) 728-4526. EOE.



## POSTDOCTORAL POSITIONS

Two postdoctoral positions are available immediately for M.D./Ph.D. or M.D., Ph.D. candidates with a background in biochemistry and molecular biology to study the role of p53 and non-p53 pathways in HPV16 E6-induced immortalization of normal human mammary epithelial cells. The project involves sequencing of the full length cDNAs of novel E6-binding proteins isolated by yeast two-hybrid system, generating antibodies against these proteins, characterizing their expression in cells and tissues and examining their role in immortalization of mammary epithelial cells.

Applicants with substantial prior background in molecular biology and biochemistry will be preferred. Salary (range \$24,000 to \$26,000) will depend on qualifications and experience. Please send curriculum vitae and names of three references to:

**Vimla Band, Ph.D.**

**Associate Professor**

**Dept. of Radiation Oncology**

**Box #824**

**New England Medical Center**

**Tufts University Medical School**

**750 Washington Street**

**Boston, MA 02111**

**Tel.#: (617) 636-4776 or 6152**

**Fax#: (617) 636-6205**

**E-mail: VBAND@opal.tufts.Edu**

## CONFERENCE

## National Institutes of Health (NIH) 1st Gene Therapy Policy Conference

## Human Gene Transfer: Beyond Life-threatening Disease

September 11, 1997  
Bethesda Holiday Inn  
Bethesda, Maryland

## NO REGISTRATION FEE

For on-line registration, visit  
our website at:

<http://www.nih.gov/od/orda/>

For further information contact:

Telephone: (301) 946-9790

FAX: (301) 946-1911

e-mail: [alldredg@reda-intl.com](mailto:alldredg@reda-intl.com)



**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**National Exposure Research Laboratory**

The U.S. Environmental Protection Agency's (EPA) National Exposure Research Laboratory (NERL) in Cincinnati, Ohio, is seeking qualified candidates for the following two positions of Mathematical Statistician, GS-1529-11/12/13:

**Ecological Exposure Research Division, Ecosystems Research Branch, OPM Announcement #AR0905:** The incumbent assists in the formulation of data quality objectives, conducts statistical analyses, and develops new statistical applications to support molecular biological and ecological research within the division. Extramural resources management duties occupy less than 25% of the incumbent's time and include conducting technical evaluation of proposals, reviewing contractor work plans, defining scope of work, certifying deliverables, and reviewing reports. Candidates must have experience in the statistical analysis and interpretation of biological or ecological experimental data.

**Human Exposure Research Division, Office of the Director, OPM Announcement #AR0969:** The incumbent participates in both preliminary and final stages of protocol design for complex microbial and chemical studies, as well as active involvement in advising staff on creative or innovative approaches to be considered in the analysis of findings relating to water pollutants. This position has no extramural resources management duties. Candidates must have experience applying both existing and/or new statistical techniques to real data problems involving microbiological or related studies.

**Requirements:** Applicants should have a degree that included 24 semester hours of mathematics and statistics, of which at least 12 semester hours were in mathematics and 6 semester hours were in statistics; OR a combination of experience and education including courses equivalent to a major as shown above plus appropriate experience or additional education.

These are permanent, full-time positions. *U.S. citizenship is required* and candidates must meet U.S. Office of Personnel Management qualification requirements. Salary ranges from \$38,202 to \$70,778 and is commensurate with qualifications. Final grade of each position is dependent upon the qualifications of the individual selected. Relocation expenses are not authorized.

**HOW TO APPLY:** All interested persons must apply through the U.S. Office of Personnel Management (OPM) by calling the OPM automated jobline on (919)790-2822 or (912)757-3000; OR accessing OPM via Internet at <http://www.usajobs.opm.gov>, AND requesting an OPM application package for the announcement number(s) listed above. Completed application materials must be received by OPM by the date stated on the OPM announcement.

*EPA IS AN EQUAL OPPORTUNITY EMPLOYER.*

# **GORDON RESEARCH CONFERENCES**

The 1998 Winter and International GRC Programs will  
appear in the October 10, 1997 Issue of *SCIENCE*

For further information visit  
THE GRC WEB SITE

**<http://www.grc.uri.edu>**

or request information by Fax at 401-783-7644

***VISIT THE FRONTIERS OF SCIENCE***  
**GO TO A GORDON CONFERENCE**



## Toxicologist

The Lubrizol Corporation, an international Specialty Chemical Company, seeks a self-starter with a Master's Degree or Doctorate in Toxicology or a related biological science to support our diversified business groups by consulting on a wide range of toxicological issues.

Responsibilities include managing external testing contracts that support new product development, product registration, hazard communication and product stewardship programs, as well as evaluating the hazards and risks of manufactured and purchased chemicals. This position requires 10+ years' industrial, government or laboratory toxicology experience and demonstrated knowledge of toxicology testing and government regulations related to human health product safety. You should be a global thinker with a strong chemistry background, along with superior decision-making, organizational and multi-tasking skills. The ability to excel under pressure is important as well. Preference will be given for ABT certification and/or experience in risk assessment methodology, structure activity relationships, hazard communication or pre-manufacture notifications.

We offer an attractive salary and benefits package, plus outstanding potential for growth and advancement. Please send your resume and salary history in confidence to: **Human Resources, The Lubrizol Corporation, 29400 Lakeland Blvd., Wickliffe, OH 44092-2298.**

 **LUBRIZOL**

An Equal Opportunity  
Employer M/F/D

No third party inquiries, please.

BUILD ON OUR  
RESEARCH  
EXCELLENCE

## DATABASE INFORMATICS: BIOLOGISTS

Professional positions are available in the Mouse Genome Informatics Program at The Jackson Laboratory with the Mouse Genome Database, Expression Resource and Tumor Biology Database for the laboratory mouse. The successful applicants will be primarily responsible for data acquisition and database maintenance, including literature searching, evaluating and analyzing data to be incorporated into the databases and interacting with research laboratories to facilitate electronic data contributions. In addition, they will participate in database and interface design work through input into database content and display concepts. Applicants should be versed in developmental, cellular or molecular biology. Knowledge of mammalian genetics a plus. Other desirable attributes include writing/communication skills and experience using computers; M.S. degree in Life Sciences or equivalent experience required.

## DATABASE USER SUPPORT: BIOLOGISTS

A professional position is available as a member of the User Support Staff associated with the Mouse Genome Informatics Group at The Jackson Laboratory. This position supports developing mammalian genetic, expression, and biological databases and interfaces for the scientific community. The individual in this position will be responsible for responding to user queries that are biological in nature via email, phone, and correspondence, instructing users in software installation, demonstrating software at conferences, and helping users with electronic data submission. In addition, he/she will participate in writing promotional and training material and in developing on- and off-line tutorials. It is expected that this individual will develop excellent familiarity with the biological databases maintained at The Jackson Laboratory and will be facile with other online database resources to aid biologists in searching for and analyzing information. Applicants should have demonstrated people skills and good organizational abilities. M.S. in genetics or developmental, cellular or molecular biology; knowledge of mammalian genetics a plus.

Applications should be addressed to:

**Human Resources**  
**The Jackson Laboratory, 600 Main Street**  
**Bar Harbor, Maine 04609**  
**Email: [jobs@aretha.jax.org](mailto:jobs@aretha.jax.org)**

*The Jackson Laboratory is an Equal Opportunity/  
Affirmative Action Employer.*

  
**The  
Jackson  
Laboratory**



## DEPARTMENT OF HUMAN BIOLOGY AND NUTRITIONAL SCIENCES

The Department of Human Biology and Nutritional Sciences at the University of Guelph invites applications for a tenure-track position at the Assistant Professor level in the area of **endocrinology and metabolism**. Applicants should have a PhD or equivalent with postdoctoral experience. The successful candidate's responsibilities will include effective undergraduate and graduate teaching in Nutritional Sciences, advising on undergraduate projects and graduate theses, and the development of an externally funded research program on cellular/molecular aspects of the hormonal control of metabolism.

The Department of Human Biology and Nutritional Sciences offers undergraduate BSc programs in Bio-Medical Science, Human Kinetics, and Nutritional Sciences that have a total enrolment of 600 students. The Department presently offers the MSc and PhD degrees and is firmly committed to graduate education.

*The University of Guelph is committed to an employment equity program that includes special measures to achieve diversity among its faculty and staff. We therefore particularly encourage applications from qualified aboriginal Canadians, persons with disabilities, members of visible minorities and women.*

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The appointment is subject to final budgetary approval.

Applications for this position should include a curriculum vitae, 2 representative publications, documentation of teaching abilities, and the names of 3 referees. The review of applications will commence 97-10-31 but applications will be accepted until the position is filled. Applications or requests for further information should be sent to:

Chair of the Search Committee  
Department of Human  
Biology and Nutritional Sciences  
University of Guelph  
Guelph, Ontario  
Canada N1G 2W1  
Phone: (519) 763-5902

**UNIVERSITY  
OF GUELPH**

## POSTDOCTORAL POSITIONS AVAILABLE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS WASHINGTON UNIVERSITY SCHOOL OF MEDICINE 660 SOUTH EUCLID AVENUE, BOX 8231, ST. LOUIS, MO

Laboratory of Dr. Enrico Di Cera: Study **THROMBIN AND RELATED SERINE PROTEASE BY KINETICS AND SITE-DIRECTED MUTAGENESIS**. Experience with mammalian expression systems and phage display is preferred. Home page: <http://www.biochem.wustl.edu/~enrico>. E-mail: [enrico@caesar.wustl.edu](mailto:enrico@caesar.wustl.edu).

Laboratory of Dr. Carl Frieden: **MECHANISM OF PROTEIN FOLDING**. Study the effects of site-directed mutagenesis as studied by equilibrium and stopped-flow NMR as well as other spectroscopic techniques (CD and fluorescence) or hydrogen-deuterium exchange. The role of the chaperonin GroE is also under investigation. Candidates should have experience in NMR as well as molecular biology techniques. Home page: <http://www.biochem.wustl.edu/~cflab>. E-mail: [frieden@biochem.wustl.edu](mailto:frieden@biochem.wustl.edu).

Laboratory of Dr. Angel Lee: Study **RECEPTOR TYROSINE KINASE-MEDIATED SIGNALING MECHANISMS IN HUMAN BREAST CANCERS, WITH AN EMPHASIS ON LINKS TO THE CELL CYCLE**, as well as molecular and biochemical characterization of growth factor-dependent signaling pathways critical for proliferation and differentiation of hematopoietic cells. A strong background in mammalian cell transfection, cellular biochemistry, or molecular biology is required. Home page: <http://www.biochem.wustl.edu/~lee>. E-mail: [lee@biochem.wustl.edu](mailto:lee@biochem.wustl.edu).

Laboratory of Dr. Timothy Lohman: Study **DNA MOTOR PROTEINS (HELICASES) INVOLVED IN DNA REPAIR AND SSB PROTEIN-DNA INTERACTIONS USING BIOCHEMICAL, BIOPHYSICAL, AND MUTATIONAL APPROACHES**. Particular emphasis on mechanistic studies using transient kinetic methods (fluorescence, stopped-flow, quenched-flow) as well as thermodynamic (equilibrium binding and isothermal titration calorimetry, analytical ultracentrifugation) and structural (X-ray crystallography) approaches. Home page: <http://www.biochem.wustl.edu/~lohman>. E-mail: [lohman@biochem.wustl.edu](mailto:lohman@biochem.wustl.edu).

Laboratory of Dr. Gabriel Waksman: **BIOPHYSICAL STUDIES OF FGF AND FGF RECEPTORS** (*Science* (1995) 268, 432; *PNAS* (1996) 93, 845; and *JBC* (1997) 272, 16382). Particular emphasis is on thermodynamic (isothermal titration calorimetry and analytical ultracentrifugation) and structural (X-ray crystallography) approaches. Home page: <http://www.biochem.wustl.edu/~waksman>. E-mail: [waksman@gwirl.wustl.edu](mailto:waksman@gwirl.wustl.edu).

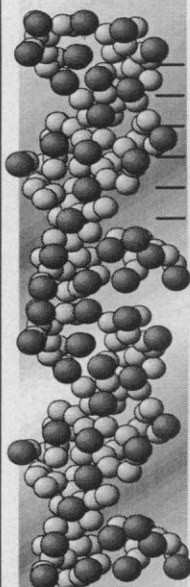
Interested candidates should send their curriculum vitae and three letters of reference to the appropriate faculty member, or contact via e-mail.

*Washington University School of Medicine is an equal opportunity/affirmative action employer.*

# PLANT BIOTECHNOLOGY RESEARCH

## Mystic, Connecticut

DEKALB Genetics Corporation, the fastest growing agricultural seed company in the U.S., has career opportunities for **Master's** level scientists with experience in molecular biology.



Successful candidates will join a multi-disciplinary team focused on the genetic improvement of crop plants.

These positions are available at DEKALB's biotechnology research facility in Mystic, CT. Mystic is a scenic shoreline community located on Long Island Sound, halfway between New York and Boston. For more information on DEKALB, visit our web site at <http://www.dekalb.com>. Please mail your resume and 3 professional references to: DEKALB Genetics Corporation, Human Resources, 62 Maritime Drive, Mystic, CT 06355-1958. EOE/AA.



## CORNELL UNIVERSITY GRADUATE SCHOOL OF MEDICAL SCIENCES

Ph.D. Degree in the Biomedical Sciences

The Cornell University Graduate School of Medical Sciences, composed of faculty drawn from Cornell University Medical College and the Sloan-Kettering Institute provides graduate training leading to the Ph.D. degree. Programs of study include *Biochemistry and Structural Biology, Cell Biology and Genetics, Immunology, Molecular Biology, Neuroscience, Pharmacology, and Physiology and Biophysics, as well as interdisciplinary training in Molecular Medicine.*

Successful applicants will be awarded full graduate fellowships covering living expenses and tuition. Subsidized university housing and a comprehensive student health plan are available for all students.

The Cornell University Graduate School of Medical Sciences is a component of a large biomedical research complex on Manhattan's upper east side that includes Cornell University Medical College, Memorial Sloan-Kettering Cancer Center, The New York Hospital, The Hospital for Special Surgery, and The Rockefeller University. These institutions constitute one of the world's outstanding centers for biomedical research, education, medical diagnosis and treatment.

*The Cornell University Graduate School of Medical Sciences is committed to the successful recruitment and training of qualified women and members of under-represented minority groups, including, but not limited to, African Americans, Alaskan Natives, Native Americans, Hispanic Americans, and Pacific Islanders.*

*Cornell University is an Equal Opportunity/Affirmative Action Employer*

To receive additional information and an application kit, contact:

Cornell University Graduate School of Medical Sciences

445 East 69th Street, New York, NY 10021

TEL: 212-746-6565; FAX: 212-746-8906

E-mail: [gsms@mail.med.cornell.edu](mailto:gsms@mail.med.cornell.edu)

WEB SITE: <http://www.med.cornell.edu/GS/gradschool.html>



# HOT CAREERS through 2005

A Special Advertising Supplement  
26 September 1997

## A PROFILE OF HOT CAREERS

SCIENCE takes you into the scientific work place of the future with profiles of current and emerging career opportunities. New and seasoned scientific professionals are sure to read this special supplement to help them prepare for the future job market.

All ads  
placed in **SCIENCE**  
appear on **SCIENCE**  
Professional Network  
absolutely  
**FREE!**

► **ISSUE COVER STORY:**  
Computers in Science

► **BONUS DISTRIBUTION:**  
**SCIENCE** Career Fair,  
3-4 October, Palo Alto, CA

► **HARVEY U.S. READERSHIP SURVEY:**  
Free to full-page advertisers

Consulting  
Combinatorial Chemistry  
Neuroscience  
Bioinformatics  
Bioprocessing Engineering  
Genomics

Call for details:

Gabrielle Boguslawski

phone: (718) 491-1607

FAX: (202) 289-6742

e-mail: [science\\_classifieds@aaas.org](mailto:science_classifieds@aaas.org)

**SCIENCE**  
[www.sciencemag.org](http://www.sciencemag.org)

**NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES  
NATIONAL INSTITUTES OF HEALTH  
SYMPOSIUM ON THE ENVIRONMENTAL GENOME PROJECT**

Masur Auditorium  
National Institutes of Health  
Bethesda, Maryland

**October 17 - 18, 1997**

**Symposium Co-chairs:** Leland H. Hartwell, Fred Hutchinson Cancer Research Center  
J. Carl Barrett, National Institute of Environmental Health Sciences  
Jack A. Taylor, National Institute of Environmental Health Sciences

The goal of the Environmental Genome Project is to facilitate identification of functionally important polymorphisms in environmental response genes that may determine differences in disease risks to environmental exposures. The meeting format will consist of presentations by invited speakers as well as discussant leaders to facilitate a free exchange of information.

**SYMPOSIUM SESSIONS INCLUDE:**

Gene Environment Interactions in Human Diseases  
Population Sampling for Polymorphism Identification  
Ethical, Legal, Social Issues  
Genome Technologies  
Functional Analysis of Polymorphisms  
Future Population-Based Epidemiological Studies

**SCHEDULED PARTICIPANTS INCLUDE:**

J. Carl Barrett	Maureen T. Cronin	Susan E. Hankinson	John D. Potter
Douglas A. Bell	Georgia M. Dunston	David J. Hunter	Jack A. Taylor
Patrick O. Brown	Glen A. Evans	Charles H. Langley	Duncan C. Thomas
Kenneth H. Buetow	Joseph F. Fraumeni	Edison T. Liu	Kenneth M. Weiss
Francis S. Collins	Frederick P. Guengerich	Stephanie J. London	Samuel H. Wilson
David R. Cox	Dean H. Hamer	Deborah A. Nickerson	
David C. Christiani	Leland H. Hartwell	Kenneth Olden	

To receive **Registration Information**, please contact **Gerri Wölfe** or **Fred Tyson** at the National Institutes of Environmental Health Sciences, P. O. Box 12233, Research Triangle Park, North Carolina 27709, USA, Telephone: (919)541-3267 or (919) 541-0175. Additional information can be found at <http://www.niehs.gov/dirosd/policy/egp>.

**The Rockefeller Foundation  
Africa Dissertation Internship Awards**

Doctoral students from sub-Saharan Africa are invited to apply to the Rockefeller Foundation for dissertation research support. The program enables Ph.D. students enrolled in U.S. and Canadian universities to return to Africa for extensive research involving field observation or the use of primary sources available only in Africa. Priority is given to research on equitable economic development in the fields of agriculture, environment, education, health, the life sciences, population, and the humanities.

Applicants are responsible for arranging affiliation with an African institution able to provide needed research support, such as laboratory facilities, access to study sites, and technical advice. The candidate's faculty advisors, the host institution in Africa, and the agency with primary responsibility for financing the student's graduate work must all send letters of endorsement. The maximum award is \$20,000. Deadlines for applications are October 1, 1997, and March 2, 1998.

Under the auspices of the African Development Dissertation Workshop Program, doctoral students from sub-Saharan Africa are invited to apply to dissertation workshops which enable participants to engage in intensive discussion of each other's projects and issues common to conducting field research in Africa. Deadlines vary by host institution.

Alumni of the ADIA program and African scholars who have received support from other Rockefeller Foundation programs and who obtained their doctoral degrees after December 31, 1990, are invited to apply for Rockefeller Foundation African Science-Based Development Career Awards. Applicants must have returned to Africa or be planning to return upon completion of their doctoral training.

For more information, please write to: **Africa Dissertation Internship Awards, The Rockefeller Foundation, 420 Fifth Avenue, New York, NY 10018 USA**, or log onto the Rockefeller Foundation website: <http://www.rockfound.org>. Choose "The Programs," then "African Initiatives."

**MEDICAL OFFICER (OBSTETRICS AND GYNECOLOGY)  
CENTER FOR POPULATION RESEARCH  
NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT  
NATIONAL INSTITUTES OF HEALTH**

The National Institute of Child Health and Human Development (NICHD) in the National Institutes of Health is seeking qualified candidates for the position of Medical Officer in the Contraception and Reproductive Health Branch of the Center for Population Research. The incumbent will have particular responsibility for studies focused on development of new contraceptive methods with special emphasis on the relationship between contraceptive efficacy and protection against sexually transmitted diseases (particularly human immunodeficiency virus infection). The incumbent will oversee studies focused on, but not limited to, clinical trials and related preclinical studies. In addition, the incumbent will represent the Branch, Center, and Institute at various professional, scientific, medical, community and other meetings in the capacity as an expert and researcher in the area of reproductive health. The salary range is \$62,903 to \$88,396 and, where applicable, a physician's comparability allowance and recruitment or relocation bonuses.

Applicants for this position must have an M.D. and be board eligible/certified in OB/GYN, and must have experience in clinical trials research which demonstrates the ability to perform the duties of this position successfully.

For additional information and application procedures, contact Ms. Balin at (301) 496-3416 or send e-mail to: [balinj@hd03.nichd.nih.gov](mailto:balinj@hd03.nichd.nih.gov)

Applications should be sent to: **Ms. JANICE BALIN, PERSONNEL MANAGEMENT SPECIALIST, NATIONAL INSTITUTES OF HEALTH, NATIONAL INSTITUTE OF CHILD HEALTH & HUMAN DEVELOPMENT, BUILDING 31, ROOM 2A25, BETHESDA, MD 20892-2425. ALL APPLICATIONS MUST BE POSTMARKED BY OCTOBER 13, 1997.**

NIH is an Equal Opportunity Employer



At Wyeth-Lederle Vaccines and Pediatrics, a member of the Wyeth-Ayerst family, we're pioneering the design, manufacture, and marketing of vaccines that are changing lives — right now!

Here, you'll help improve the quality of a lot of lives, including your own. Our research facility, located in a suburb of Rochester, NY is within easy reach of some of New York State's most attractive cultural, educational and recreational activities.

## RESEARCH SCIENTIST IMMUNOLOGY GROUP

We are currently seeking a Research Scientist for our Immunology Group. Working in a multidisciplinary environment, you will interact with scientists from the Molecular Biology, Bacteriology, Protein and Carbohydrate Chemistry departments in the design and preclinical testing of prototype vaccine formulations.

To qualify, you should have a Ph.D. (or equivalent), related experience in humoral and cellular immunology, skill in state-of-the-art molecular biology techniques, and a knowledge of the mucosal immune system.

At Wyeth-Lederle you'll enjoy a professional atmosphere and the kind of salary and benefits package you would expect from an industry leader. Please send your resume to: **Human Resources Department, Wyeth-Lederle Vaccines and Pediatrics, 211 Bailey Road, West Henrietta, NY 14586-9728.** An Equal Opportunity Employer.



**Wyeth-Lederle Vaccines and Pediatrics**  
Protecting Families Through Immunization®

### Chairperson,

### Department of Biological Sciences, Texas Tech University

Nominations and applications are invited for the position of chairperson of the Department of Biological Sciences at Texas Tech University. The applicant should have an earned doctorate in an area of biological science, strong administrative skills, an established research record, and a commitment to excellence in teaching, service, research, and other scholarly activities. As the chief administrative officer of the department, the chairperson will also be expected to manage budgetary and personnel matters, promote curriculum development and educational innovation, and have excellent interpersonal skills that can be applied to enhancing the productivity of a large, diverse department. Candidates must be eligible for appointment at the rank of Professor in the department. Anticipated starting date is September 1, 1998. Screening of applications will begin October 15, 1997, and continue until the position is filled. Only applications postmarked by December 1, 1997, will be given consideration. Applicant's materials should include a statement of interest, a full curriculum vitae, and names, addresses, telephone numbers, and e-mail addresses of three references. Applicants should request of their references that letters be forwarded directly to the university. All materials should be sent to **Prof. R. M. Anderson, Chair, Search Committee, Department of Mathematics, Texas Tech University, Lubbock, Texas 79409-1042. FAX (806) 742-1112.**

*Texas Tech is an EEO/AA employer.*

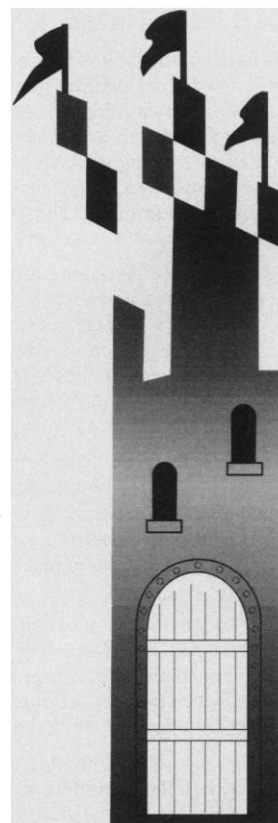
# Open Doors

**Can't get in?** SCIENCE Professional Network can help you open doors with the most complete and searchable database of career opportunities.

**[www.sciencemag.org](http://www.sciencemag.org)**

Select SCIENCE Professional Network

**SCIENCE**  
PROFESSIONAL  
NETWORK



## POSITIONS OPEN

### POSTDOCTORAL POSITION PHARMACOLOGY/BIOCHEMISTRY

A Postdoctoral position is available immediately to study the aryl hydrocarbon receptor and its ligands. The position requires a Ph.D. with strong training in biochemistry and molecular biology. Experience in recombinant techniques for expressing proteins is desirable. FAX or mail a curriculum vitae and the names of three references to: **R. Peterson, School of Pharmacy, University of Wisconsin-Madison, 425 North Charter Street, Madison, WI 53706. FAX: 608-265-3316. Equal Opportunity/Affirmative Action Employer.**

Entry-level **POSTDOCTORAL POSITION** at Emory University available to study the molecular basis of leukocyte interactions with polarized epithelial cells. While no previous postdoctoral experience is necessary, a background in molecular biology is required. Site-directed mutagenesis preferred. *U.S. citizenship or green card required.* Interested individuals should e-mail or send résumé to: **Dr. Charles Parkos, Department of Pathology, Room 2309 WMRB, Atlanta, GA 30322. E-mail: cparkos@emory.edu. Emory University is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately to study the rTS gene. rTS is a gene that produces two proteins and antisense RNA to human thymidylate synthase RNA. Protein-related studies will involve enzymology and subcellular localization; RNA studies will involve RNA editing. Training in either molecular biology or protein biochemistry is required. Please forward a curriculum vitae and three letters of reference to: **Dr. Bruce J. Dolnick, Department of Experimental Therapeutics, Roswell Park Cancer Institute, Buffalo, NY 14263. FAX: 716-845-8857; e-mail: dolnick@sc3103.med.buffalo.edu. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available to study the biochemistry of hemoglobins. Expertise in recombinant DNA technology, site-directed mutagenesis, and protein purification essential. Studies will focus on ligand-linked self-association of animal hemoglobins. Prior experience in physical biochemistry advantageous. Send curriculum vitae and three letters of recommendation by October 15th, 1997, to: **Austen F. Riggs, Department of Zoology, University of Texas, Austin, TX 78712-1064. E-mail: riggs@uts.cc.utexas.edu. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available to study the transcriptional regulation of the human apolipoprotein B gene in the liver. Experience in protein purification is required and molecular biology is preferred. Please send curriculum vitae and a list of references to: **Dr. Hriday K. Das, Department of Pharmacology, University of North Texas Health Science Center, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2699. Telephone: 817-735-5448; FAX: 817-735-2091. Ref: BBRC 215:394; BBRC 220:553; Biochemistry 36:960. Equal Opportunity/Affirmative Action Institution.**

**POSTDOCTORAL POSITION** available immediately to study signal transduction and the physiological roles of interneuronal gap junctions in olfactory receptor neurons. Experience in electrophysiology is essential. Please send curriculum vitae and the names of three references to: **Vincent E. Dionne, Ph.D., Boston University Marine Program, Marine Biological Laboratory, Woods Hole, MA 02543 USA. Telephone: 508-289-7255; FAX: 508-289-7910; e-mail: vdionne@bu.edu.**

**POSTDOCTORAL POSITION** in ion channel physiology. A position is available October 1 to study inward rectifier potassium channels in glia. Candidates should have previous experience with electrophysiological techniques or in molecular biology. *U.S. citizenship is required.* Send curriculum vitae to: **Leslie C. Timpe, Ph.D., Cardiovascular Research-111C5, VA Medical Center, 4150 Clement Street, San Francisco, CA 94121. The VA is an Equal Opportunity Employer.**

**POSTDOCTORAL FELLOWSHIP** at Wellman Laboratories of Photomedicine. Should have a Ph.D. in cell biology or biochemistry. Must be interested in photobiology/photomedicine. Send curriculum vitae to: **T. Hasan, Ph.D., Wellman Laboratories of Photomedicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114. MGH is an Equal Opportunity Employer; women, minorities, disabled, and veterans are encouraged to apply.**

## POSITIONS OPEN

### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Position available to study signal transduction and mechanisms of cell death in Alzheimer's disease. For reference see: *JBC* 272:14505, 1997; *Neuron* 16:921, 1996; *Nature* 378:776, 1995; *Nature* 368:756, 1994. Experience in molecular and cell biology is required. Send curriculum vitae, a brief description of research experience, and names of three references to: **Dr. Bruce Yankner, Children's Hospital, Enders 260, 300 Longwood Avenue, Boston, MA 02115. FAX: 617-738-1542.**

### POSTDOCTORAL POSITION GENETIC TOXICOLOGY HARVARD SCHOOL OF PUBLIC HEALTH

To develop and automate the yeast DEL assay (*Nature* 337:285) into a commercially viable high throughput genetic toxicology assay for the pharmaceutical industry to identify carcinogens. Experience in molecular biology, microbiology, and/or assay automation required. Please apply to: **Dr. Robert H. Schiestl, Department of Molecular and Cellular Toxicology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.**

**POSTDOCTORAL POSITION** is available immediately for studying the role played by small GTP-binding proteins in secretion (*Science* 252:1553; *J. Cell Biol.* 130:1051, 131:583, 137:563). Interest in cell biology and yeast genetics are required. Send curriculum vitae and three references to: **Nava Segev, Ph.D., Department of Pharmacology and Physiological Sciences, The University of Chicago, 947 East 58th Street, Chicago, IL 60637. Telephone: 773-702-3526; FAX: 773-702-3774; e-mail: ns15@midway.uchicago.edu.**

**POSTDOCTORAL POSITIONS** are available to study the mechanisms of vascular disease at the new Heart and Lung Institute of Ohio State University. Researchers are needed for two areas: 1) Molecular analysis and modification of vascular signaling systems in normal and diseased cells. Applicants for this post should have a strong background in molecular biology and cellular physiology. 2) Physiological analysis of vascular cell function in intact, perfused microvessels. Applicants for this post should have considerable experience in the analysis of microvessel reactivity. Highly qualified applicants should send their curriculum vitae and names of three references to: **Nicholas A. Flavahan, Ph.D., Associate Director, Heart and Lung Institute, The Ohio State University, Medical Research Facility, Room 524, 420 West 12th Avenue, Columbus, OH 43210-1214.**

**POSTDOCTORAL FELLOWSHIP** available immediately to investigate the effects of alcohol on hepatocyte pathology, fibrogenesis, and liver-specific gene regulation. Applicants should have an M.D. or Ph.D. degree and be citizens or permanent residents of the United States. Please send your curriculum vitae and the names and telephone numbers of three references to: **Dr. Esteban Mezey, Professor of Medicine, 921 Ross Research Building, The Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, MD 21205.**

**POSTDOCTORAL POSITION** is available immediately to study signal transduction by protein kinases and mechanism(s) of cell death by TNF or anticancer agents. Experience in molecular biology, biochemistry, or cell biology and a strong interest in signal transduction preferred. Send curriculum vitae and names of three references to: **Dr. Alakananda Basu, E1358 Biomedical Science Tower, University of Pittsburgh School of Medicine, Pittsburgh, PA 15261. Telephone: 412-648-2052; FAX: 412-648-1945; e-mail: anb@prophet.pharm.pitt.edu.**

**POSTDOCTORAL POSITIONS** (three years) are available immediately on an NIH training grant in the following laboratories: **Dr. Douglas S. Darling:** regulation of gene transcription by thyroid hormone receptors, and human molecular genetics; or **Dr. William W. Young, Jr.:** structure and function of Golgi glycosyltransferases, and glycosphingolipid trafficking. Individuals must have Ph.D., M.D., or D.M.D., and *U.S. citizenship or permanent residency.* Send curriculum vitae and names of references to either: **Dr. Darling or Dr. Young, University of Louisville, Dental School, Room 301, 501 South Preston Street, Louisville, KY 40292. FAX: 502-852-4702.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study mechanism of retinal degenerations caused by genetic mutations and potential gene replacement therapies using viral vectors in animal models. Experience in molecular biology, biochemistry, transgenic or gene knockout techniques desired. Send curriculum vitae and references to: **Dr. Tiansen Li, Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, MA 02114. FAX: 617-573-3216; e-mail: tli@meci.harvard.edu.**

**POSTDOCTORAL POSITION** available immediately to carry out structure-function studies of TCRs and antibodies (e.g., *Science* 270:1821-1824; *Nature Biotech.* 15:637-640). Experience in molecular immunology and biophysical techniques desirable but not essential. Please send curriculum vitae and details of three referees to: **Dr. E. Sally Ward, Department of Microbiology, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-8576, USA. E-mail: sally@skylab.swmed.edu.**

Two NIH-funded **POSTDOCTORAL POSITIONS** are now available in the Division of Hematology-Oncology, Beth Israel Deaconess Medical Center, Harvard Medical School, to study the effects of various members of the tumor necrosis factor and receptor families (e.g., fas, CD40, and their ligands) on cytokine-induced tumor regression in mice. Experience with transfection, reverse transcriptase-polymerase chain reaction, and other molecular techniques (in particular, the baculovirus system) or with animal tumor models desired. Send curriculum vitae and references to: **James W. Mier, M.D., Beth Israel Deaconess Medical Center, 330 Brookline Avenue, Research East, Room 319, Boston, MA 02215. Telephone: 617-667-0430; FAX: 617-975-5398; e-mail: jmier@bidmc.harvard.edu.**

## ANNOUNCEMENT

### RESEARCH GRANTS ON LYME DISEASE PREVENTION

The American Lyme Disease Foundation, Inc. is providing support for three to five proposals of \$10,000 each (no overhead included) to initiate innovative research in preventing Lyme and other tick-borne infections. For details, contact: **David L. Weld, Executive Director, American Lyme Disease Foundation, Mill Pond Offices, 293 Route 100, Somers, NY 10589. Telephone: 914-277-6970; FAX: 914-277-6974. All applications must be postmarked by November 15, 1997.**

## MARKETPLACE



### TEXAS INSTRUMENTS

Surface Plasmon Resonance  
Integrated Microsensor

What will YOU do  
with this technology?

- Measure antibody-antigen binding?
- Analyze mixtures?
- Monitor thin films?
- Quantify refractive index changes?

To learn more about the SPR sensing technology and our Experimenter's Kits, please visit us at <http://www.ti.com/spr>

Circle No. 34 on Readers' Service Card

### Human Liver Cell Systems

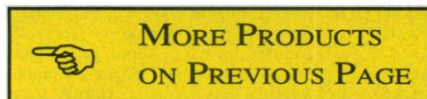


ACTIVTox

HTS and IVTox Applications  
[act@amphioxus.com](mailto:act@amphioxus.com), 1-800-777-2707

Circle No. 35 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. 16 on Readers' Service Card

## Superior Supports for DNA \* Peptides \* SPOS



**Solid Phase  
Sciences**

40 Mark Drive, San Rafael, CA

A division of Biosearch Technologies, Inc.

The Leader in Solid Phase Chemistry

800-GENOME1 www.solidphase.com

Circle No. 26 on Readers' Service Card

## QUALITY CUVETTES!!!

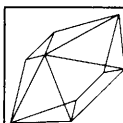
Inexpensive Electroporation Cuvettes  
Each sterile package includes a free  
pipette for easy sample removal!



1-800-289-2465

FAX: 619-597-9594

Circle No. 23 on Readers' Service Card



**CRYSTALLIZATION  
RESEARCH TOOLS**

FREE CATALOG & SAMPLE  
800-452-3899 Fax (714)-5861453  
E-mail: xtalex@aol.com  
http://www.hamptonresearch.com



Circle No. 2 on Readers' Service Card

NEW for 1997

Cell Systems

Serum-Free Human Cell Systems

Vascular Smooth Muscle Cells

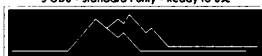
1-800-697-1211

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. 9 on Readers' Service Card

## Custom Peptides And Antibodies

100% Guarantee; No Antibody, No \$\$

Alpha Diagnostic Intl. Inc.

(800) 786-5777; Fax (210) 561-9544

Email: info@4adi.com

Web Site: www.4adi.com

Circle No. 47 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: 1-319-626-8444

Phone: 1-800-328-2661

Circle No. 5 on Readers' Service Card

CUSTOM DNA SYNTHESIS

PURE & SIMPLE

- Superb Technical Support

- Impeccable Quality

- World's Fastest Service

- Cap Gel & TOF Mass Spec

\* Some restrictions apply. Please call for details.

**MIDLAND**

STILL THE UNDISPUTED #1 CUSTOM DNA SYNTHESIS SERVICE

THE MIDLAND CERTIFIED REAGENT COMPANY

Phone 1-800-247-8766 FAX 915-694-2387

email mcrc@oligos.com

Circle No. 7 on Readers' Service Card

## CELL CULTURE

Your best source in the world for

**Human Cells, Animal Cells, and Cell Lines.**

Guaranteed quality, responsive technical support.



**Cell Applications, Inc.**

1-800-645-0848; Email: cellappl@aol.com

Circle No. 44 on Readers' Service Card

MARKETPLACE

## EASY WEB ORDERING

http://www.biosyn.com

biosyn@onramp.net

## PRIMERS

PURIFIED

NO SET UP FEES  
**65¢**  
/base

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

## PEPTIDES

FREE MASS SPEC

NO SET UP FEES  
**15<sup>00</sup>**  
/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. 8 on Readers' Service Card

## PepSets™

Low cost sets of unpurified PEPTIDES from  
\$33/peptide. Need high numbers of  
peptides for screening, mapping, analoging,  
SAR studies? Please call for details:

**CHIRON TECHNOLOGIES**

US: East Coast Tel: 800 633 8161 Fax: 800 424 3970

US: West Coast Tel: 800 644 1866 Fax: 800 655 1866

International Tel: +61 3 9565 1111 Fax: +61 3 9565 1199

Europe Tel: +33 141 38 9400 Fax: +33 141 38 9409

Circle No. 21 on Readers' Service Card



**Custom Polyclonal Antibodies**

BEST PRICES • BEST ANIMALS

**ANIMAL PHARM SERVICES**

(800) 808-0550

Circle No. 15 on Readers' Service Card

## DNA Sequencing

as low as \$40/run

Single & Double Stranded DNA

Plasmid or PCR DNA

Fast Turn Around

1-800-OLIGOS-1

http://www.ana-gen.com

**ANA-GEN**  
Ana-Gen Technologies, Inc.

Circle No. 17 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. 4 on Readers' Service Card



# CONTROL VARIABLES.

With TruMeasure™ chemicals, you can increase accuracy and consistency.  
Reduce hazards, waste and effort. Save time, too!



Bring a new measure of control to your work.

Sigma's TruMeasure™ chemicals provide a new level of precision, reliability and safety. Not to mention convenience.

These unique products are pre-measured, preweighed and premixed. In tablet, capsule, powder and liquid form, they contain exactly the chemicals you need for the job at hand, ready to use.

Choose substrates in tablets and liquids. Buffers and fermentation

media in tablets and pouches. Specialty chemicals in capsules and tablets.

Most TruMeasure chemicals are individually packaged for single use. All are available in bulk. Sigma also offers custom formulations produced under cGMP conditions.

For a detailed brochure entitled "We're Ready When You Are," call 1-800-282-1298 or 314-771-5765, collect. To get a free T-shirt, buy \$75 worth of TruMeasure products and reference product number T 5132 with your order.



## SIGMA

Biochemicals and Reagents for Life Science Research

P.O. Box 14508, St. Louis, MO 63178 USA 314-771-5765

<http://www.sigma.sial.com>

A Member of the Sigma-Aldrich Family

© 1997 Sigma-Aldrich Co. Sigma-Aldrich brand products are sold exclusively through Sigma-Aldrich, Inc. Reproduction forbidden without permission. Sigma and TruMeasure are trademarks of Sigma-Aldrich Co.

Circle No. 24 on Readers' Service Card

# Introducing...

# GENEHOGS™

## CELLS WITH AN ATTITUDE

Competent cells with an appetite for even more than whole genes. GENEHOGS™ are ultra-competent cells for gobbling up vectors with large inserts. Not a proprietary strain, but just good old *E. coli* DH10B that has been prepared to accept very large fragments of ligated DNA. Each batch of GENEHOGS™ is validated for high transformation efficiency with BACs containing inserts ranging in size from 6 kb to 150 kb. These especially greedy cells were developed by Scott Stagg, a technician in our R&D unit while working on methods for bacterial artificial chromosome (BAC) library construction. BACs have proven to be desirable vectors for generating large insert genomic DNA libraries (1,2) but it is critical that all components are of high quality in order to obtain the highest cloning efficiencies possible. GENEHOGS™ have been specially processed to allow for high transformation efficiencies when electroporating with high molecular weight BACs. In addition to being ideal for BAC transformations, GENEHOGS™ can be used for cDNA or other genomic libraries. GENEHOGS™ contain the  $\phi$ 80dlacZAM15 marker which provides for  $\alpha$ -complementation of the  $\beta$ -galactosidase gene of pBeloBAC11 or other similarly derived BAC vectors. Thus, the convenience of blue/white screening of colonies on LB agar containing X-gal and IPTG is available. For more information, please send e-mail to epauli@resgen.com.

### Kit Components

- GENEHOGS™, 5 tubes, 100 $\mu$ l each
- 150kb insert BAC control plasmid DNA

### References:

1. Shizuya, H., B. Birren, U.-J. Kim, V. Mancino, T. Slepak, Y. Tachiiri, M. Simon. Cloning and stable maintenance of 300-kilobase-pair fragments of human DNA in *Escherichia coli* using an F-factor-based vector. *Proc. Natl. Acad. Sci.* 89:8794-8797.
2. Kim, U.-J., B.W. Birren, T. Slepak, V. Mancino, C. Boysen, H.-L. Kang, M.I. Simon, & H. Shizuya. 1996. Construction and characterization of a human bacterial artificial chromosome library. *Genomics*. 34:213-218.

™ GENEHOGS is a trademark of Research Genetics.



## Research Genetics

*Accelerating Discovery*

2130 Memorial Pkwy, SW • Huntsville, AL • 35801

U.S. or Canada 800-533-4363

Worldwide 205-533-4363

U.K. 0-800-89-1393

FAX 205-536-9016

<http://www.resgen.com>

Circle No. 36 on Readers' Service Card