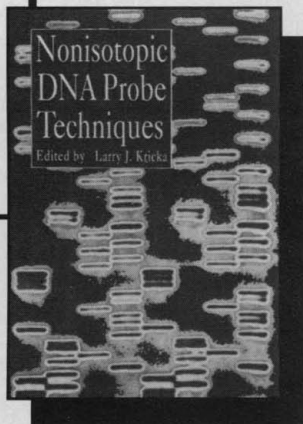


NEW

FROM ACADEMIC PRESS



Contains step-by-step procedures.

Nonisotopic DNA Probe Techniques

edited by
Larry J. Kricka

Comb Bound: \$39.95
ISBN: 0-12-426296-1
Casebound: \$69.95
ISBN: 0-12-426295-3
March 1992, 358 pp.

The Genome of *Drosophila melanogaster*

Dan L. Lindsley and
Georgianna G. Zimm

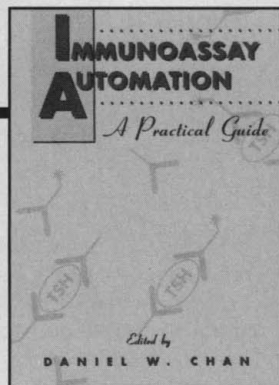
March 1992, 1,133 pp.
\$79.00 with maps/ISBN: 0-12-450990-8
Map Packet Only: \$19.95
ISBN: 0-12-450991-6

*Designed to help researchers make
the most of their CE separations.*

Capillary Electrophoresis Theory and Practice

edited by
Paul D. Grossman
and Joel C. Colburn

July 1992, 352 pp., \$69.95
ISBN: 0-12-304250-X



Immunoassay Automation

A Practical Guide

edited by
Daniel W. Chan

Comb Bound: \$49.95
May 1992, 367 pp./ISBN: 0-12-167632-3

Nuclear Trafficking

edited by
Carl M. Feldherr

A Volume in the CELL BIOLOGY Series
June 1992, 320 pp., \$95.00
ISBN: 0-12-252050-5

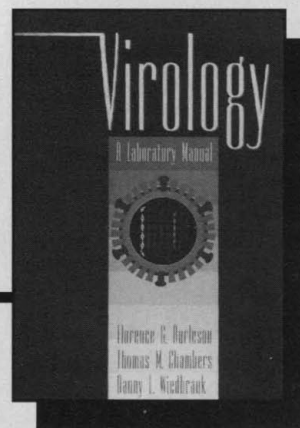
Mechanisms of Eukaryotic DNA Recombination

edited by
Max E. Gottesman
and Henry J. Vogel

June 1992, 215 pp., \$55.00
ISBN: 0-12-293445-8

Transgenic Animals

F. Grosveld and G. Kollias
July 1992, c. 288 pp., \$72.00 (tentative)
ISBN: 0-12-304530-4



Virology

A Laboratory Manual

Florence G. Burleson,
Thomas M. Chambers,
and Danny L. Wiedbrauk

Comb Bound: \$29.95
May 1992, 250 pp./ISBN: 0-12-144730-8
Instructor's Manual available.

Fundamentals of Plant Virology

R.E.F. Matthews
June 1992, 403 pp., \$59.95
ISBN: 0-12-480558-2

Plant Tissue Culture Techniques and Experiments

Roberta H. Smith
Comb Bound: \$29.95 (tentative)
July 1992, c. 166 pp.
ISBN: 0-12-650340-0

GUS Protocols

Using the GUS Gene as a Reporter of Gene Expression

edited by
Sean R. Gallagher
Comb Bound: \$29.95
March 1992, 221 pp./ISBN: 0-12-274010-6

50
YEARS



Order from your local bookseller or directly from

ACADEMIC PRESS Harcourt Brace Jovanovich, Publishers
Book Marketing Department #09062, 1250 Sixth Avenue, San Diego, CA 92101
Quote this reference number for free postage and handling on your prepaid order **09062**
Prices subject to change without notice. © 1992 by Academic Press, Inc. All Rights Reserved. JHJF/FL—09062.

CALL TOLL FREE

1-800-321-5068

FAX **1-800-235-0256**

Circle No. 1 on Readers' Service Card

Monoclonal Antibody Measuring Kit

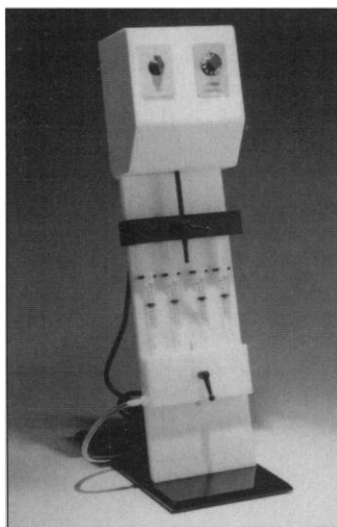
QUICKMeasure is a fast and easy way to determine the concentration of monoclonal antibodies in cell culture or during purification. It can determine the concentration of any class or subclass of antibody, including IgG, IgM, IgA, and IgE, in about 30 min. The sensitivity limit is 1 μ g of antibody. If serum supplements are used in the culture medium, bovine immunoglobulin does not interfere with QUICKMeasure. The kit contains all the reagents needed and requires only a spectrophotometer to determine the results. Sterogene. Circle 91.

DotPunch Membrane Processor

DotPunch punches 7-mm disks from membranes processed through any 96-well manifold. Fingertip pressure on the spring-loaded disk cutter punches dots cleanly from all microporous membranes (nylon, nitrocellulose, etc.). The disks are deposited directly into the wells of an 8 by 12 microtiter tray for transfer to scintillation or gamma-counting vials. It provides the means for convenient, precise quantitation of dot-blot assays in immunology and molecular biology without the need for manual cutting and slicing of membranes. Inotech Biosystems. Circle 92.

DNA Cartridge Purification System

The DNA MATE cartridge purification system automatically delivers solvents and reagents into DNA purification cartridges for the purification of trityl-on DNA. It is designed for use with commercially available reversed-phase cartridges for the purification of DNA following removal from the synthesis column and ammonia deprotection. The protocol provided by the cartridge manufacturer can easily be applied to this system which comes



equipped with a timer and motor for delivering solvents and reagents through the cartridge. Flow rates are adjustable. Barrskogen. Circle 93.

Analysis and Presentation Software

Stanford Graphics is a Microsoft Windows-based program designed to combine mathematical analysis and presentation tools in one package. Presentation tools include master slides, visual slide sorter, bullet chart outliner, speaker notes, and text chart templates. Analytical tools include a three-dimensional spreadsheet with a 70-trillion data-point capacity and the capability to perform a wide range of trigonometric and statistical data transformations, including data smoothing, polynomials, and fast Fourier transforms. The more than 160 graph types include contour and surface plots, probability charts, process and quality control charts, automatic curve fitting, and those using Cartesian, polar, or cylindrical coordinates. The program requires an 80286-, 80386-, or 80486-based IBM or compatible computer, Microsoft Windows

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

3.0 or 3.1, MS-DOS 3.1 or higher, and 2 megabytes memory, with mouse and math coprocessor compatible with Intel 80287 or 80387 recommended. 3-D Visions. Circle 94.

Semi-Dry Mini-Electroblotter

This semi-dry mini-electroblotter is designed for the rapid and efficient transfer of DNA, RNA, and proteins. Features include a high-integrity electrode configuration that ensures a steady voltage gradient throughout the transfer. The unit can accommodate any gel size up to 3.25 by 4.75 inches, can perform up to three gel transfers simultaneously, and is suitable for Northern (RNA) blots, Southern (DNA) blots, and protein immunoblots. Electro Bio-transfer. Circle 95.

Programmable Fluorescence Detector

The FD-400 Programmable Fluorescence Detector is a stand-alone unit offering RS 232 communications, timed event methods, scanning of excitation and/or emission monochromators, and programmability of all front panel functions such as auto zero, range, and scan rate. Groton Technology. Circle 96.

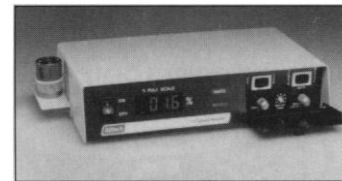
Chromatography Macintosh Software

PEAKS Version 1.1 allows the user to acquire, analyze, and present chromatographic data in full color or at the full dot resolution of a Laser Writer printer. The software allows export of pictures as well as computed values, such as height and area, to spreadsheets, word processors, graphics

programs, and databases. PEAKS can be used as an analysis-only package or, with the MacLab Data Interface Module, can be used to record as many as four detector channels directly to a Macintosh computer. The software supports internal and external standards for peak identification and quantification, manual or automatic base-line fit, and an intelligent macro facility for automating analysis procedures. ADInstruments, MacLab Division. Circle 97.

LC Solvent Recycler

The LC Solvent Recycler decreases isocratic liquid chromatography mobile-phase consump-



tion by up to 80%. An electrically actuated valve immediately downstream from the system's detector responds to the detector signal by diverting contaminated solvent to waste and recycling the clean solvent for reuse. The user can adjust the instrument's sensitivity to contaminant parameters for each method performed, so recycled mobile phase is always pure. Alltech Associates. Circle 98.

Literature

smartEddy 3.0 Test Software—Addendum No. 2 describes new additions to eddy-current test system software. SE Systems. Circle 99.

VideoMicroscope OVM1000NM/N is a full-color brochure on a system with a range of objectives for magnifications from $\times 20$ to $\times 1000$. The OVM1000 can be hand-held or clamped on a tripod. In addition to the basic version with or without memory, a still video recorder is available to store up to 50 images on a single floppy disk. Olympus. Circle 100.

HEAT SHOCK STRESS RESPONSE

StressGen Offers A Wide Selection Of Molecular Reagents For The Stress Response Researcher:

- MONOCLONAL ANTIBODIES - Specific for individual Heat Shock Proteins.
- DNA PROBES - Plasmid based with inserts specific for the Heat Shock Genes.
- EXPRESSION VECTORS - HSP - based with promoter and/or reporter genes that can be selectively turned On or Off in response to Heat Shock and other stressors.
- PURIFIED HEAT SHOCK PROTEINS

Orders and Technical Information: (604) 652-6780
Toll Free in Continental US: (800) 661-4978

StressGen Biotechnologies Corp.

6761 Kirkpatrick Crescent, Victoria, B.C., Canada V8X 3X1
Tel: (604) 652-6780 Fax: (604) 652-0624
In Japan, Funakoshi Co., Ltd., Tel: 81-3-5684-1622

Circle No. 30 on Readers' Service Card

PERSONAL BIBLIOGRAPHIC DATABASES...

These cost more:

ENDNOTE • DMS 4 CITE • PRO-CITE
REFERENCE MANAGER • REF-11

This does more:

PAPYRUS™

Version 7!

- Manages up to 2 million reference citations. Stores up to 16,000 characters and 100 keywords per reference.
- Dozens of predefined output formats, plus the ability to easily design your own.
- 100% compatible with WordPerfect*, Microsoft Word*, WordStar*, PC-Write, XyWrite.
**including Windows™ versions*
- Can also be used with virtually all other word processors.
- Fast, powerful search capabilities.
- Able to import references from national databases, CD-ROM files, monthly diskette services, other bibliography programs, or almost any other database or text file.
- Allows an unlimited number of Notecards for each reference.
- Powerful new user interface.
- Fully compatible with Windows™

for IBM-PC and compatibles
also available for VAX-VMS
Macintosh version under development

Complete System \$99

Full money-back guarantee on purchase of Complete System.

Research

SOFTWARE DESIGN

Demo System \$25

Demo price credited toward subsequent Complete System purchase.

2718 SW Kelly Street, Suite 181
Portland, OR 97201
(503) 796-1368 FAX: 503-241-4260

Outside North America, add \$10 shipping charge - U.S. funds, on a U.S. bank.

Circle No. 23 on Readers' Service Card

TEMP•TRONIC™ THERMAL CYCLER

HOT PRODUCT COOL TECHNOLOGY



- Linking
- Easy to Program
- Rapid Temperature Cycling
- Compressor-based Refrigeration
- Temp. & Time Extensions
- Now in a 48-well - 0.2 ml design for even greater repeatability between runs
- Very Affordable

THERMOLYNE

Barnstead/Thermolyne
2555 Kerper Blvd. • P.O. Box 797
Dubuque, IA 52004-0797

FOR MORE DETAILS CALL 800-553-0039

Circle No. 24 on Readers' Service Card

Slash Your Gel Documentation Costs Now!



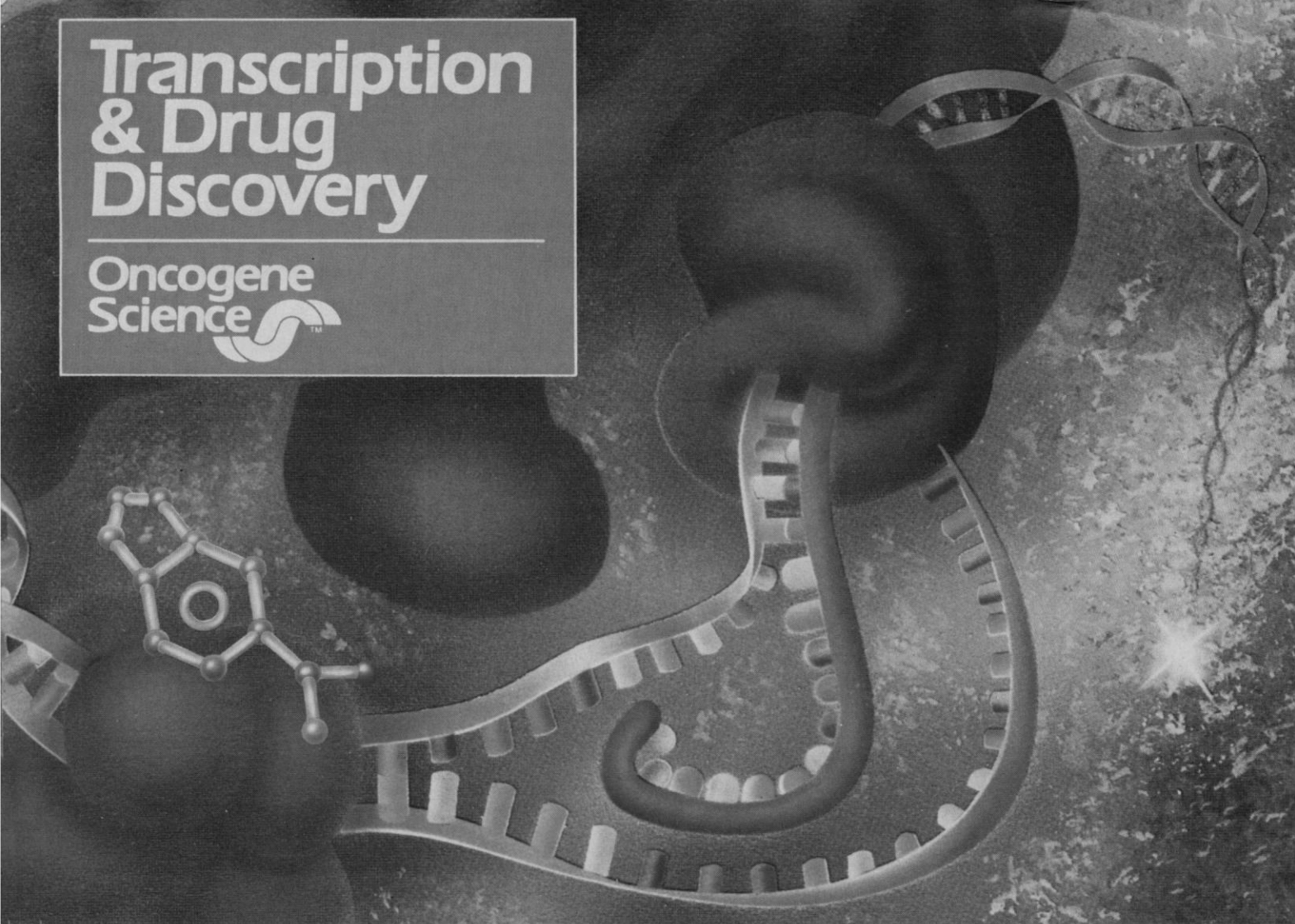
For further information and to schedule a demonstration. Call toll free:

800-452-6788

UVP, INC.

Celebrating Our 60TH Year
Serving The Scientific Community.

Circle No. 25 on Readers' Service Card



Transcription
& Drug
Discovery

Oncogene
Science 

4TH INTERNATIONAL

Oncogene Science Conference at Cold Spring Harbor Laboratory

OCTOBER 22-24, 1992

**Speakers
to include:**

H. Blau	S. McKnight
G. Crabtree	M. Parker
B. Cullen	B. Roizman
T. Curran	M. Rosenfeld
G. Foulkes	J. Scott
D. Granner	P. Sharp
F. Grosveld	R. Weinberg

The meeting will focus on
gene transcription as a
novel target for drug discovery.

Therapeutic areas to be covered include:

- Cancer
- CNS
- Immunosuppression
- Metabolism
- Retenoids
- Thalassemias
- Viruses

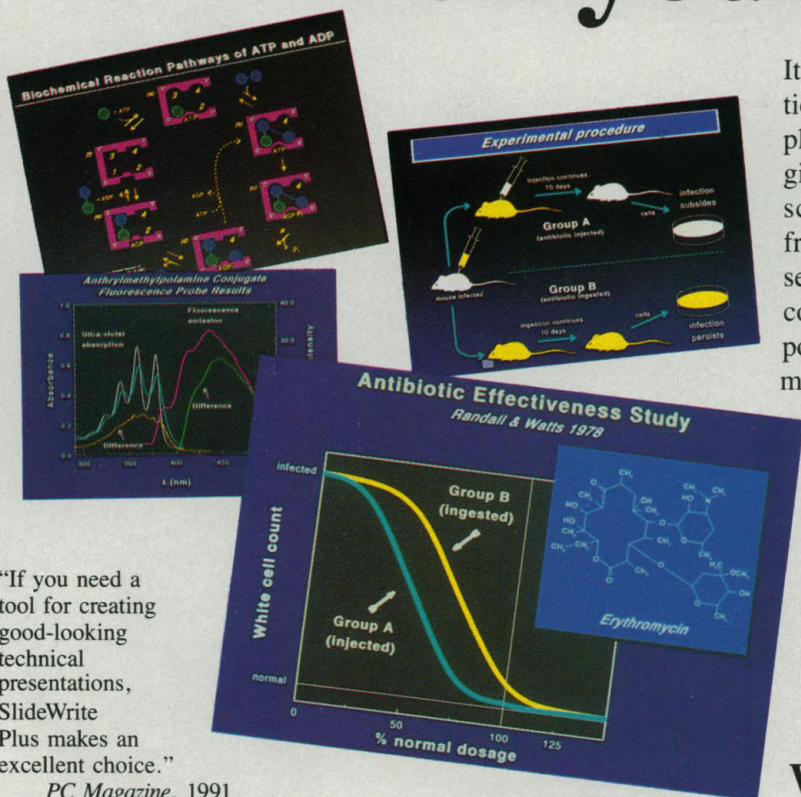
For further
information and
registration
materials write:

**Oncogene
Science,
Inc.**

106 Charles Lindbergh Blvd.
Uniondale, NY 11553
fax: 516/222-0114

Circle No. 34 on Readers' Service Card

Show off your results!



"If you need a tool for creating good-looking technical presentations, SlideWrite Plus makes an excellent choice."
PC Magazine, 1991

It's easy with SlideWrite Plus – the PC presentation software that supports all popular printers, plotters, and film recorders. SlideWrite Plus gives you technical graphing, word charting, science figure packs, scalable fonts, plus freehand drawing. No wonder it's the perfect presentation tool for the scientific and technical community! If you want to turn your data into powerful presentations that get noticed and remembered, you need SlideWrite Plus!

Order SlideWrite Plus for just \$445, satisfaction guaranteed, or get a FREE working demo.

(619) 931-1919

FAX (619) 931-9313

Advanced Graphics Software, Inc.
 5825 Avenida Encinas, Suite 105, Carlsbad, CA 92008

NOW AVAILABLE IN WINDOWS™ OR DOS

SlideWrite Plus™
 We make your data look terrific.

Circle No. 11 on Readers' Service Card

With enough patience, you can perform any 2D measurement with this equipment.



Save yourself a lot of trouble.

Put your planimeter, ruler, and calculator away. Use SigmaScan™ instead.

With SigmaScan, it takes only seconds to measure angles, areas, lengths, perimeters, slopes, and points and analyze the data on your own IBM PC or compatible. Each measurement is organized in a worksheet the way you want it, with the units you specify. You can even transform data based on your equations, and store data in standard ASCII files for use in other programs. SigmaScan, it takes the trouble out of 2D measurement.

For free brochure, call 800-874-1888 (415-453-6700 in CA and Canada).



Jandel
 SCIENTIFIC

"Microcomputer Tools for the Scientist"
 2591 Kerner Blvd., San Rafael, CA 94901
 Phone: 415-453-6700 FAX: 415-453-7769
 In Europe: Schimmelbuschstraße 25
 D-4006 Erkrath 2 • W. Germany
 Phone: 0 2104 / 3 60 98
 Fax: 0 2104 / 3 31 10

Circle No. 12 on Readers' Service Card

*With a FOTODYNE
GeneSprinter™
we'd have been home
hours ago!*

*You can now sequence 77% more DNA bases
in 1/5th the time!*

With the new FOTODYNE GeneSprinter™ Manual DNA Sequencing System – a revolutionary sequencing system that allows single loading separation of 250 bases for up to 6 templates in less than 20 minutes!

Radically different from standard vertical sequencing systems, the GeneSprinter™ is based on horizontal, ultra-thin gel electrophoresis. This technology gives the GeneSprinter™ Manual DNA Sequencing System that leading edge in speed and convenience while enhancing resolution.

Call today for more information on this remarkable new system!

1-800-362-3686

Also ask for your FREE copy of FOTODYNE's
molecular biology products catalog.

FOTODYNE
INCORPORATED

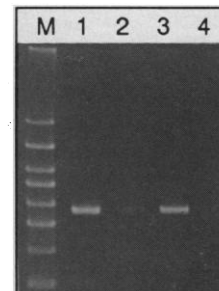
Circle No. 20 on Readers' Service Card

**Spending Hours on PCR† Specimen Prep?
If You Could Reduce This To Minutes, Would You?
Now You Can Simplify DNA Isolation with *GeneReleaser™***

***GeneReleaser* Features:**

- Minimal sample required, i.e. 1µl blood
- Minimal "hands on" procedure
- Ideal for batch preparations
- Performed directly in .5ml tubes
- Performed directly on thermocycler
- Proceed directly to amplification
- Suitable for samples as diverse as:
whole blood, serum, plasma, urine,
sputum, plants, and many others.

Amplification of HLA DRB
producing an @272 bp
product.
M = BioMarker™ Low
1 = GeneReleaser treated 120
day old whole blood stored at
4°C.
2 = Same as 1 - GeneReleaser.
3 = GeneReleaser treated 120
day old whole blood stored at
-20°C.
4 = Same as 3 - GeneReleaser

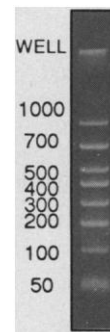


GeneReleaser™ 400-1600 assay size Catalog No. GR-1 Circle Reader No. 35

Accurately Size Your PCR Products With *BioMarker™ Low*

***BioMarker* Features:**

- Ideal band sizes
- Accurate determination of product size
- Estimation of product yields
- Equal band intensities
- Exposed 5'OH groups for kinasing
- Suitable for HPLC or CE standards
- Biotinylated and Digoxigenin versions



BioMarker™ Low 50 Assay size Catalog No. M-1 Circle Reader No. 36

10 Minutes to Protein Free DNA with *EnZap™*

***EnZap* Features:**

- Rapid removal of proteins
- No phenol/chloroform
- 99+% protein and enzyme removal
- 90+% DNA/RNA recovery
- Batch preparations
- Suitable for Plasmid or Phage prep
- Genomic preps
- DNase and RNase free

Alkaline Phosphatase removal		
Units AP per 100µl	After EnZap O.D. 405nm	% Removal
5 Units	.010	~ 100%
2.5 Units	.010	~ 100%
1.2 Units	.010	~ 100%
0 Units	.010	NA

EnZap™ 5, 25 and 100 Assays Catalog No.'s EZ-5; EZ-25; EZ-100 Circle Reader No. 37

PHONE TOLL FREE: 1-800-235-8938

FAX: 1-615-896-4837

International Call: 615-896-7353 JAPAN: Funakoshi Co., Ltd. TEL: 81-3-5684-1622

BioVentures, Inc. P.O. Box 2561 Murfreesboro, TN 37133-2561

† The PCR process is owned by Hoffmann-La Roche, Inc.

GeneReleaser, BioMarker and EnZap are trademarks of BioVentures, Inc.

FROM BENCHTOP TO BOOKSHELF

Sigma's 1992-1993 *Techware* Catalog features laboratory equipment and supplies selected specifically with the needs of the biotechnologist in mind.

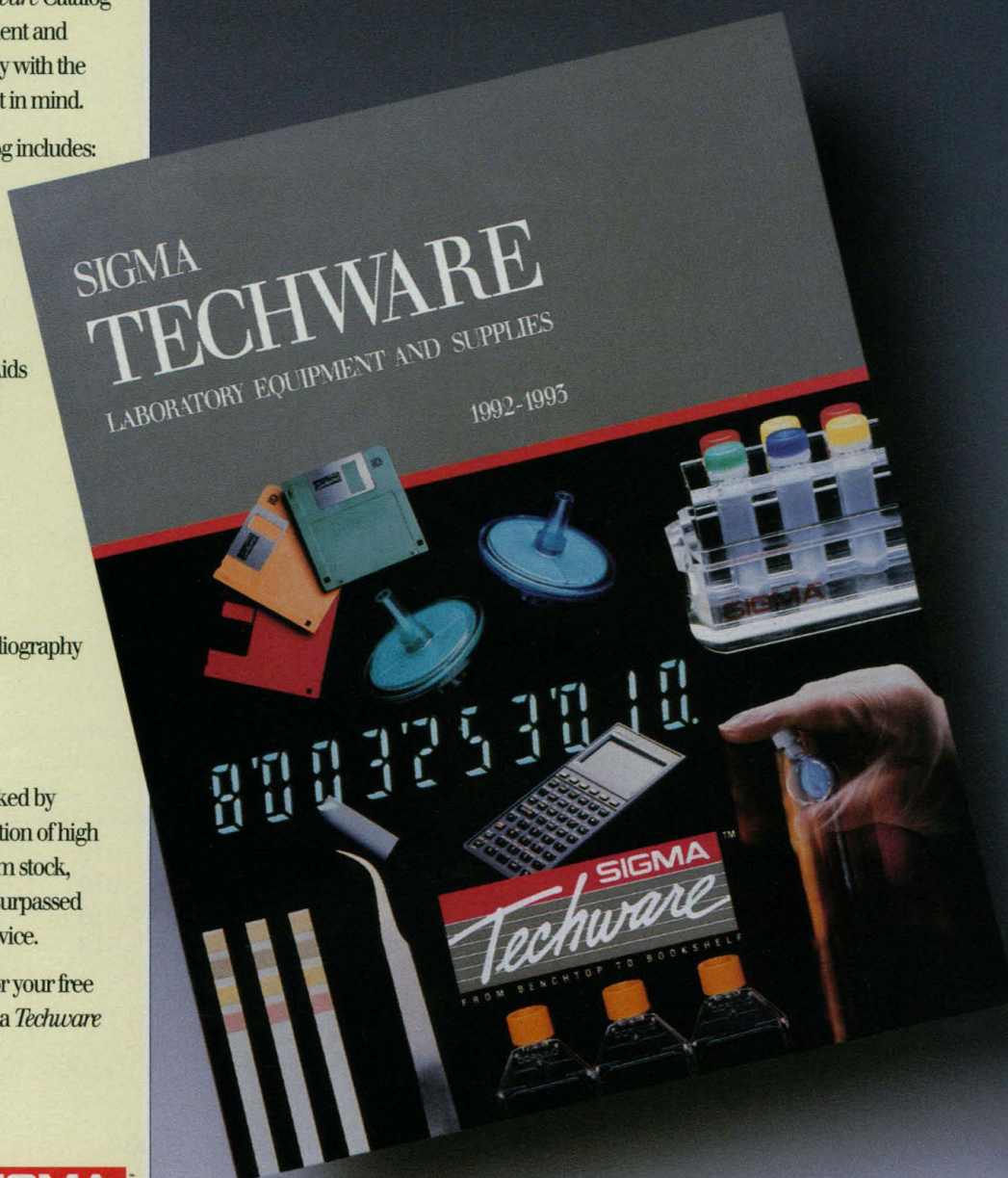
The NEW *Techware* Catalog includes:

- Centrifugation
- Chromatography
- Computer Software and Hardware
- Culture Apparatus
- Education/Presentation Aids
- Electrophoresis
- Filtration
- General Laboratory Apparatus and Supplies
- Liquid Handling/Pipets
- Microscopy
- pH Measurement
- Photography and Autoradiography
- Safety
- Spectroscopy
- Books

Techware products are backed by Sigma's long-standing tradition of high quality, prompt delivery from stock, competitive prices, and unsurpassed customer and technical service.

Call us at 1-800-325-3010 for your free copy of the 1992-1993 Sigma *Techware* Catalog.

SIGMA
Techware
FROM BENCHTOP TO BOOKSHELF



Circle No. 19 on Readers' Service Card

SIGMA 
CHEMICAL COMPANY
P.O. BOX 1450R, ST. LOUIS, MO 63178 USA

Great Mouse Detectives:

ELISA Kits to capture and quantitate mouse cytokines.

Our line up:

IL-1 α

IL-2 *NEW*

TNF- α

IFN- γ

Genzyme's mouse cytokine kits offer you...

Accuracy: specific cytokine measurement

Reliability: inter- and intra-assay CV < 10%

Sensitivity: low pg/ml measurements

Speed: results within hours

Flexibility: multiple assays/kit

For more information or to place an order,
call **1-800-332-1042** or contact your
local Genzyme distributor.

genzyme

One Kendall Square
Cambridge, MA 02139 USA

© Genzyme Corporation April 1992

Circle No. 33 on Readers' Service Card

SCIENCE

PERSONNEL PLACEMENT

LINE CLASSIFIED ADVERTISEMENTS

- **Deadlines:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Advertisements must be submitted in writing.
- **How to Submit a Classified Ad:** Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training.
- **Mail or FAX materials to:**
Science Classified Advertising
1333 H Street, N.W., Room 814
Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816
- **Rates:** Ads are \$42 per line; \$420 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads. If you would like *Science* to give estimated cost, indicate on letter.
- **Ads from Outside the U.S.:** Prepayment made in U.S. dollars by checks drawn on U.S. banks is required.
- **Credit Cards:** *Science* accepts MasterCard and VISA. Discount does not apply to credit cards.
- **Cancellations:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

DISPLAY PERSONNEL ADVERTISEMENTS

For rates and information about fractional display ads (all ads 1/8 page and larger) and all Marketplace listings, contact:
Science Classified Advertising
Deborah Cummings
Telephone: 202-326-6541

Janis Crowley, Recruitment
Advertising Manager
Telephone: 212-496-7704
FAX: 202-682-0816

CONDITIONS: Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap or sexual preference. The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it.

POSITIONS OPEN

The Division of Endocrinology and Metabolism at the UNIVERSITY OF CALIFORNIA, IRVINE (UCI), invites applications and nominations for a tenure-track FACULTY POSITION at the ASSISTANT PROFESSOR level. Candidates should have expertise in molecular and cellular approaches to study aspects related to the endocrine system. Applicants must have an M.D. or M.D./Ph.D. degree and have a strong record of research accomplishments, with the potential to develop an independent research program. The division is committed to excellence in endocrinology while providing a fertile environment for interactive research at UCI and affiliated institutions.

Interested applicants should send their curriculum vitae, a statement of research interest, and names and addresses of at least three references to: Dr. Murray Korc, Chief, Division of Endocrinology and Metabolism, Department of Medicine, UCI Medical Center, P.O. Box 14091, Orange, CA 92613-1491. UCI is an Affirmative Action/Equal Opportunity Employer.

DOMESTIC ANIMAL BEHAVIOR

ASSISTANT PROFESSOR of Animal Sciences at the University of Illinois, tenure track, 65% research and 35% teaching. A Ph.D. in animal sciences or related field with emphasis in behavior science is required. Extramural funding and establishment of an independent research program is expected. Teaching will consist of lecture and laboratory courses at the undergraduate and graduate levels. Direction of graduate student research at both the master's and Ph.D. level is expected. Submit a résumé, transcripts, a letter describing the reason for interest in the position and ask three references to send letters to: Dr. D. R. Campion, Head, University of Illinois, Department of Animal Sciences, Room 327 Mumford Hall, 1301 West Gregory Drive, Urbana, IL 61801. Telephone: 217-333-3462. Closing date is 15 August 1992 or until filled. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer Institution.*

THE UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF), ADJUNCT ASSISTANT OR ASSOCIATE PROFESSOR, OR RESEARCH SERIES. The Gallo Center seeks exceptional candidates eligible for a staff scientist position and an adjunct faculty appointment at UCSF. The major research interests of the Center are in signal transduction and gene expression with an emphasis on relevance to alcoholism. This is securely-funded position to assist the Director in supervising a research group in cellular and molecular biology. Excellent laboratory facilities and substantial research support are available. Successful applicants will have well-documented research experience and accomplishment. Send curriculum vitae and bibliography, a summary of research accomplishments, copies of relevant publications and arrange to send three to five letters of recommendation to:

Ivan Diamond, M.D., Ph.D.
Director, Gallo Center
University of California
Building 1, Room 101
1001 Potrero Avenue
San Francisco, CA 94110

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

ASSISTANT PROFESSOR RADIOLOGY/CHEMISTRY

The MGH-NMR Center of the Massachusetts General Hospital and Harvard Medical School has an opening for a physician/scientist at the Assistant Professor level with experience in medical imaging, chemical synthesis and immunology. Candidates should hold the degree of M.D. or M.D./Ph.D., Board certification in radiology, and should have sufficient research experience to demonstrate significant accomplishments and strong promise. Resources are available to develop a strong research program addressing problems in imaging contrast agent design and application. Letters of application should include curriculum vitae, bibliography, a brief statement (less than 500 words) indicating research activities, three letters of recommendation, and a notarized copy of degree to be sent to: Thomas J. Brady, M.D., Director, MGH-NMR Center, Building 149, 13th Street, Charlestown, MA 02129.

The Massachusetts General Hospital and Harvard Medical School is an Equal Opportunity/Affirmative Action Employer. Qualified women and minority members are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR BIOLOGICAL OCEANOGRAPHY

The Department of Oceanography at Old Dominion University announces a new tenure-track position for an assistant professor in biological oceanography. Preference will be given to those whose research area involves experimental laboratory or field work in secondary production or microbial processes or benthic studies. A strong commitment to both undergraduate (the department has a minor in oceanography) and graduate education is important. The successful candidate will be expected to maintain an active, funded research program and teach graduate courses in her/his discipline. Position will be available in August 1992. Applicants must have a Ph.D., and postdoctoral experience is also preferred.

The Department of Oceanography has been selected by the university for special emphasis and is growing rapidly; we currently have 18 faculty members, with 60 graduate students pursuing M.S. and Ph.D. degrees in oceanography. Within the department, research programs range from studies of coastal processes to examinations of the biological, chemical and physical dynamics of the world's oceans and sediments.

Send curriculum vitae, the names of three references, and a detailed statement of research interests by 1 July 1992 to: Old Dominion University, Department of Oceanography, Norfolk, VA 23529. The position becomes available 1 August 1992 and can be filled either for the fall or spring semester. *Old Dominion University is an Affirmative Action/Equal Opportunity Employer and requires compliance with the Immigration Reform and Control Act of 1986.*

ASSISTANT PROFESSOR of Internal Medicine and Pediatrics (Clinical Scholar Track), University of Texas Southwestern Medical Center at Dallas.

Must have an M.D. degree, 3 years of Internship and Residency training and have completed a 3-year Fellowship in Pediatric Critical Care. Prior experience in human cardiovascular physiology and space research desirable. The principal duty is to participate in a major research project on cardiovascular adaptation to microgravity. Experiments will be performed on two Space Shuttle flights scheduled for 1993. Clinical assignment available as an Attending Physician (Board-certified/eligible) within the Department of Pediatrics program in critical care. The position will be open 1 July 1992. Inquiries and applications should be directed to: C. Gunnar Blomqvist, M.D., Professor of Internal Medicine and Physiology, Division of Cardiology, H8.122, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9034. Telephone: 214-688-3425, FAX: 214-688-2036. *The University of Texas Southwestern Medical Center at Dallas is an Equal Opportunity/Affirmative Action Employer.*

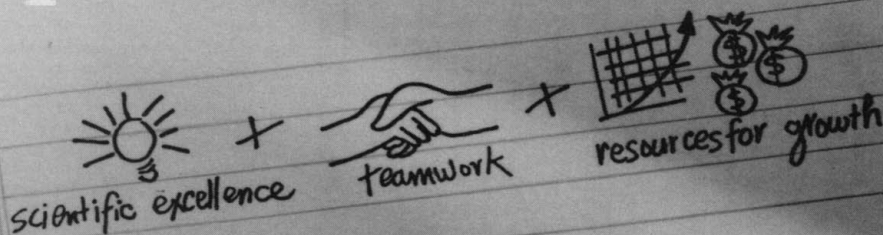
ASSISTANT PROFESSOR

A tenure-track position is available effective 1 September 1992. The successful candidate must demonstrate the ability to conduct a vigorous research program with expertise in endothelial-dependent regulation of arterioles and venules. The appointee will join a physiology faculty deeply committed to cardiovascular research and will participate in its medical and graduate training programs. Send curriculum vitae, summary of research interests, and names of three references to: Dr. Harris J. Granger, Professor and Head, Department of Medical Physiology, College of Medicine, Texas A&M University Health Science Center, College Station, TX 77843. *Texas A&M University is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST

Position available immediately for **POSTDOCTORAL, RESEARCH ASSOCIATE, OR RESEARCH ASSISTANT PROFESSOR** to join ongoing study of molecular genetics of human pyrimidine enzymes. Requirements: Ph.D. in molecular biology or related discipline with experience in mammalian gene cloning, as evidenced by publications. Position and salary commensurate with qualifications and experience. Send cover letter with research interest, curriculum vitae and three references to: Dr. Robert B. Diasio, Box 600 Volker Hall, University of Alabama at Birmingham, Birmingham, AL 35294-0019. *Equal Opportunity/Affirmative Action Employer.*

How to solve the equation for success.


scientific excellence + teamwork + resources for growth


[$H_2O + NaCl$ + a great location] + recognition + rewards = Pfizer Research

Pfizer is a lot more than a pharmaceuticals and healthcare industry leader. It's a group of people dedicated to discovering, developing and marketing innovative pharmaceuticals, animal health and specialty chemical products that improve the quality of life worldwide. As a Fortune 100 company, Pfizer is committed to continuing its remarkable growth by investing more than half a billion dollars annually in research and development.

BS/MS Scientists

Anti-tumor Drug Discovery—Recent discoveries in molecular biology underlying the regulation of cell replication have created exciting new opportunities for anti-tumor drug discovery. We are looking for scientists to work with the Cancer Department project teams to discover novel chemotherapeutic agents targeted against oncogenic proteins and proteins that regulate cell replication.

We have two positions available at the BS/MS level for scientists with diverse technical skills. One position requires laboratory experience in cell culture, immunoassays such as western blots or ELISA and enzyme purification/assay. The second position requires experience in cell culture and molecular biology techniques of DNA isolation and manipulation. An interest in drug discovery and willingness to work as a team member is essential for both positions.

Diabetes and Obesity Research—Our Diabetes and Obesity Research Group is seeking a laboratory assistant to conduct studies in elucidating the mechanisms controlling energy expenditure, insulin action and carbohydrate metabolism. Previous laboratory experience involving Biochemical and Molecular Biology skills would be advantageous.

Our excellent benefits include competitive salaries, health and dental care, paid holidays and vacations, savings, investment and pension plans, and relocation assistance to our attractive Connecticut shore location.

To learn how you can be part of our success, please send your resume to: **Mr. Kym Goddu, Central Research Division, Pfizer Inc, Eastern Point Road, Groton, CT 06340.** We are an equal opportunity employer.



Central Research

The elements of success.

The recent opening of the new Glaxo Inc. Girolami Research Institute, located in Research Triangle Park, NC, represents Glaxo's continued commitment in the pharmaceutical industry to the discovery of drugs for unmet patient needs. Scientists engaged in Glaxo's expanding research and development programs at the Center have a premier facility in which to work. The following opportunity is now available in our Immunology Department.

SR. MOLECULAR IMMUNOLOGIST

We seek a Cell Biologist/Biochemist to investigate the molecular mechanisms underlying the differentiation and activation of monocytes/macrophages. Research will be directed towards novel points of intervention in signal transduction mechanisms or protein compartmentalization (trafficking). This individual will be part of an interdisciplinary team dedicated to the discovery of novel drugs for the treatment of chronic inflammatory diseases such as rheumatoid arthritis.

Background must include a Ph.D. or M.D. with a minimum of 2 years of postdoctoral research experience in immunology, biochemistry or related life science. Experience in molecular biology and biochemistry in the area of inflammation is desirable.

Join Glaxo and enjoy an excellent salary, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork, and outstanding opportunities for career satisfaction. Equally appealing is our world famous scientific, industrial and academic community in Research Triangle Park, NC. Send your resume, to include salary history, to: **Human Resources Department, Job #9128X102-SC, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709.** (No Phone Calls or Agency Referrals, Please.) An Equal Opportunity Employer M/F/H/V.

Glaxo Inc.

National Institutes of Health

VIROLOGIST

Postdoctoral position is available in the Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases involves (1) the development and characterization of a live attenuated parainfluenza virus type 3 (PIV3) vaccine; (2) the application of the principles of viral genetics and molecular virology to produce viral mutants suitable for use as live virus vaccines and the principles of viral immunology to evaluate the immunogenicity and efficacy of the vaccines in experimental animals and humans; (3) use of recombinant DNA methodology and site-directed mutagenesis to study the molecular pathogenesis of PIV3 in animals. Applications are invited from individuals who have a doctoral degree in Medicine, Microbiology, Virology, Biochemistry, Chemistry or Pathobiology and who are within three years of receiving their Ph.D. Previous experience with molecular techniques is preferred. Salary will be commensurate with experience.

Qualified and interested candidates should send curriculum vitae and names and address of three (3) references to:

Brian R. Murphy, M.D.
National Institutes of Health
Building 7, Room 106
9000 Rockville Pike
Bethesda, MD 20892
FAX: (301) 496-8312

NIH is an Equal Opportunity Employer

USDA Forest Service Forest Environment Research Fisheries, Wildlife, and Rangeland Ecology Staff Assistant \$46,210-\$54,607

The USDA Forest Service will be seeking applicants for the position of Staff Assistant to provide leadership and coordination of national programs in fisheries, wildlife, and rangeland research. The incumbent assists in formulating policies related to fisheries, wildlife, and rangeland resources, develops research program objectives and budgets, and reviews and coordinates research programs of eight regional experiment stations. The Staff Assistant coordinates Forest Service research programs with other public agencies and private institutions and consults with land management agencies on the application of research results. Major areas of emphasis for Forest Service fisheries, wildlife, and rangeland research include threatened, endangered, and sensitive species; biodiversity; habitat selection; monitoring; the ecology of sensitive ecosystems; and big game/livestock interactions. Candidates may represent a variety of professional backgrounds including wildlife biology/ecology, fisheries biology, rangeland ecology, or plant ecology. Experience in conducting research and managing research programs is preferred. The position is located at Forest Service Headquarters in Washington, DC, and frequent travel is required.

For additional information contact Michael R. Lennartz, Forest Environment Research, USDA, Forest Service, 14th and Independence, SW, Washington, DC 20250 (202-205-1524). To receive a copy of the vacancy announcement along with application materials please call 202-205-1524.

The Forest Service is an Affirmative Action/Equal Opportunity Employer. Cultural diversity in the workplace is welcomed, and women, members of minority groups, and people with disabilities are encouraged to apply.

POSITIONS OPEN

FACULTY POSITIONS IN CELL, MOLECULAR AND STRUCTURAL BIOLOGY

Applications are invited for tenure-track positions in the Department of Cell, Molecular and Structural Biology at Northwestern University Medical School. **ASSISTANT to FULL PROFESSOR** applicants must have a Ph.D., M.D., or equivalent degree, with research experience in cell, molecular, or structural biology. Applicants will be screened with respect to their ability to carry on vigorous independent research and to participate in the various teaching programs administered by the department. Candidates whose research interests include developmental biology, biochemistry, and structural biology are encouraged to apply, although outstanding applicants with research interests in other areas of molecular biology will be considered. Send complete curriculum vitae and a brief description of research interests by 15 September 1992 to: **Dr. Rex Chisholm, Chairman, Search Committee, Department of Cell, Molecular and Structural Biology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

Northwestern University is an Equal Opportunity/Affirmative Action Educator and Employer and invites applications from all qualified individuals. Applications from women and minorities are especially sought.

ASSISTANT PROGRAM DIRECTOR

The National Research Initiative Competitive Grant Program of the U.S. Department of Agriculture (USDA) seeks a qualified scientist to serve as Assistant Program Director for grants administration in each of the four divisions indicated below. Candidates must have training in or knowledge of one of the following areas:

Plant Systems: general plant biology, plant molecular biology, plant genetics, plant physiology, plant pathology, rhizosphere biology, plant ecology, or photosynthesis.

Animal Systems: general animal biology, animal molecular biology, animal genetics, animal physiology, or veterinary medicine.

Natural Resources and Environment: general plant biology, forestry, plant ecology, plant physiology, or rhizosphere biology.

Processing for Value Added: general food science, food engineering, food technology, or non-food processing.

Candidates must have a Ph.D., M.S., or B.S. or appropriate specialized experience.

Closing date is 20 July 1992. For information on the position, contact: **Dr. Sally Rocky, National Research Initiative Competitive Grants Program, CSRS/USDA, Room 323 Aerospace Building, Washington, DC 20250-2200. Telephone: 202-401-5114.** For information on application procedures/forms, contact: **Ms. Kathy Asmussen, Personnel Staff Specialist, 202-720-9811. USDA is an Equal Opportunity Employer.**

The College of Medicine of the University of Tennessee, Memphis, seeks nominations and applications for a **CHAIRMAN** of the Department of Medicine. Applicants should hold the M.D. degree or equivalent and be Board-certified in internal medicine. We seek a leader with superb academic background, research credentials, clinical abilities, educational commitment, and management skills who can move our Department of Medicine through the changes necessary to meet the challenges of the twenty-first century. The College of Medicine is located in one of the nation's largest health science centers that includes the following teaching hospitals and ambulatory sites: The University of Tennessee (UT) Medical Center—Bowld Hospital, the UT Medical Group, the Regional Medical Center at Memphis, the Memphis Veterans Affairs Medical Center and the Baptist Memorial Hospital. The current full-time faculty of the Department of Medicine is comprised of 120 capable individuals. Desired starting date is 1 July 1993. We will begin accepting applications immediately and will continue until a final candidate is selected. Applicants should submit curriculum vitae and the names and addresses of three referees to: **Russell W. Chesney, M.D., Chairman, Medicine Advisory Committee, College of Medicine, University of Tennessee, Memphis, 800 Madison, P.O. Box 63647, Memphis, TN 38163.**

The University of Tennessee is an Equal Opportunity/Affirmative Action/Title IX/Section 504/ADA Employer. We are committed to an aggressive affirmative action effort.

POSITIONS OPEN

ADMINISTRATOR for scientific society in Philadelphia to assist with the implementation of Board and committee initiatives. Requires dedicated, detail-oriented person with Bachelor's degree (graduate degree preferred), excellent writing skills, ability to handle multiple projects, and experience using computers. Science background valuable. Send résumé, cover letter, salary history, and writing sample to: **AJ, P.O. Box 54335, Philadelphia, PA 19105.**

PROFESSOR AND CHAIR, DEPARTMENT OF BIOLOGICAL CHEMISTRY. The University of California, Irvine (UCI), College of Medicine, seeks outstanding scientist in molecular biology or biochemistry, including, but not limited to, disciplines such as developmental biology, neurobiology, and human genetics. The candidate must be of great distinction, and lead an active research program. Send nominations or applications to: **Professor Francisco J. Ayala, Chair of Search Committee, c/o Janet Nash, Room 246 Irvine Hall, College of Medicine, University of California, Irvine, CA 92717.** Nominations and applications will be accepted through October 1992. *UCI is an Affirmative Action/Equal Opportunity Employer. Nominations of and applications from women and minorities are encouraged.*

CHAIR, DEPARTMENT OF PSYCHIATRY. St. Paul-Ramsey Medical Center (SPRMC) is a major teaching affiliate of the University of Minnesota. Ramsey Clinic (RC) is a multispecialty group practice with regional outreach programs. The successful candidate must be qualified to administer a department of psychiatry in a group practice and to lead faculty, residents, and medical students in service, education and research at SPRMC, and in relation to the RC outreach program. Research facilities are available. Administrative and clinical experience and the capability for program development and evidence of productive research and leadership in the candidate's professional field are required. The candidate is expected to qualify for appointment at or above the Assistant Professor level at the University of Minnesota.

Salary is commensurate with experience. Forward curriculum vitae by 1 September 1992 to: **Erhard Haus, M.D., Ph.D., Chairman, Search Committee for Chair of Psychiatry, St. Paul-Ramsey Medical Center/Ramsey Clinic, 640 Jackson Street, St. Paul, MN 55101, telephone: 612-221-8825.**

The University of Minnesota and the St. Paul-Ramsey Medical Center are Equal Opportunity Educators and Employers.

CYTOGENETIC LAB DIRECTOR

LGS/LABORATORIES FOR GENETIC SERVICES, INC. Position available for an ABMG Board-certified or Board-eligible Ph.D. or M.D. Experience in prenatal, pediatric, and cancer cytogenetic diagnostics is required. The successful candidate will participate in directing the 10-year-old, rapidly expanding cytogenetics lab and will direct FISH technology for use in genetic diagnosis. LGS, located in the Texas Medical Center area, has academic affiliations. All applicants send curriculum vitae and a minimum of three professional references to:

LGS
Peggy Pearce Caskey
President
6410 Fannin, #910
Houston, TX 77030
FAX: 713-797-9731

Equal Opportunity Employer.

BELINSON MEDICAL CENTER, ISRAEL. DEPARTMENT OF PATHOLOGY. One thousand-bed general hospital, one of the largest in Israel, affiliated to Tel Aviv University, Sackler Faculty of Medicine, invites applications for **HEAD, Department of Pathology.** Applicants must be Board-certified with high academic credentials. The appointment can commence any time between 1 January 1993 and 31 December 1993. Please forward curriculum vitae, names of three references before 30 September 1992 to: **Professor E. Antebi, Chairman of Search Committee, Beilinson Medical Center, Petah Tikva 49100, Israel.**



Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

NSERC INTERNATIONAL FELLOWSHIPS

1993

The Natural Sciences and Engineering Research Council of Canada (NSERC) offers International Fellowships to provide foreign doctoral graduates with the opportunity to further their research training and experience. These awards are tenable in Canadian universities.

Eligibility: Applicants must have obtained a doctoral degree in one of the natural sciences or engineering from a recognized foreign university within the last four years (or expect to have obtained such a degree by the time the award is taken up). Candidates must not be Canadian citizens or permanent residents of Canada.

Duration of Award: Fellowships are for one year; renewals for a second year are possible.

Stipend and Number of Fellowships: Fellowships have an annual value of \$29,000 plus a travel allowance. It is expected that 70 new fellowships will be offered.

Application Procedures: Applications must be submitted directly to the university department in which it is proposed to hold an award, **not** to NSERC. Candidates must not apply to more than one university.

Date of Submission: The deadline for receipt of applications by the proposed host university is November 15, 1992.

For further information or to obtain the application forms, contact:

International Fellowships Office
Natural Sciences and Engineering Research Council
200 Kent Street
Ottawa, Ontario
CANADA K1A 1H5
Telephone: (613) 992-9169

Canada

EXECUTIVE DIRECTOR TULANE/XAVIER INSTITUTE for ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

Tulane and Xavier Universities in New Orleans seek an executive director with experience in environmental restoration and waste management to lead a newly created institute. The institute is a coordinated effort by the faculty of the two universities in partnership with industry and government. Its activities include education; risk assessment; research and technology development and transfer; risk management and risk communication; and legal, financial, and policy studies associated with environmental restoration and waste management at the nation's nuclear weapons production facilities. Applications are invited from individuals currently in academia, industry, and government. The salary is competitive and commensurate with experience.

Letters of application or nomination must be accompanied by a curriculum vitae and the names and addresses of three references. Tulane and Xavier Universities are equal opportunity, affirmative action employers. Qualified women and minority group members are strongly encouraged to apply. Review of applications will begin on July 27, 1992, and will continue until the position is filled. All correspondence should be directed to:

Dean William C. Van Buskirk
Chair of Search Committee
ERWM Institute Executive Director
Engineering Dean's Office
Tulane University
New Orleans, Louisiana 70118

Applied-Physics/Engineering Physics (1 position) Cardiac Muscle Cell Physiologist/Biophysicist (1 position): 1, Post-doctoral position is available for a recent Ph.D. to assist in developing and conducting experiments with parallel electron energy loss spectroscopy on an intermediate voltage, field emission gun equipped electron microscope. Special detection and data analysis systems, appropriate for high resolution quantitation of trace element concentrations in biological specimens, are being developed. The candidate is expected to have sufficient skills in instrumentation to assist in interfacing a special purpose CCD camera with a parallel detector electron spectrometer system and to develop application software. Some experience with electron microscopy, electron optics and vacuum technology desirable. There is also an opportunity for participating in research with scanning probe microscopy. The appointment is for 1 year and renewable for up to 5 years. Salary is commensurate with experience. **2, Recent Ph.D.** to conduct collaborative research on high resolution electron optical studies of cardiac membrane composition with electrophysiological correlations. Experience in cardiac cell physiology/cell biophysics, preferably including the use of single and paired cell preparations, is required, and an interest in membrane channels and arrhythmias desirable. Please send Curriculum Vitae and letter indicating research interests to Professor Andrew P. Somlyo, Department of Physiology, Box 449 Jordan Hall, University of Virginia School of Medicine, Charlottesville, VA 22908. The University of Virginia is an equal opportunity employer.

MILES Pharmaceutical
Division

At Miles Research Center in West Haven, CT, you'll be working in the Institute for Molecular Biologicals, conducting innovative biomedical research. As the expanding Research Center of an international pharmaceutical leader, we offer scientific challenges and opportunities for individual growth. Play your part in the advancement of therapeutic medicine in one of the following positions:

CELL/MOLECULAR BIOLOGISTS**Senior Research Scientist**

A staff position is open in the **Biologicals Discovery Group**, which is devoted to the discovery and characterization of novel proteins which regulate the growth, differentiation and activation of mammalian cells. The group works closely with many research entities in the Miles organization, including the Biological Products segment in Berkeley, CA, a leader in the development and manufacture of recombinant proteins for therapeutic use. We are looking for an individual who is highly motivated, has 2-3 years' postdoctoral experience, and has proven expertise in the cell and molecular biology of mammalian stem cells. Familiarity with cell immortalization or with growth factors/cytokines and their receptors would be an asset.

Postdoctoral Fellow

A postdoctoral position is open to study the molecular basis of the interaction of Rhinovirus with its cell surface receptor, ICAM-1 [Greve, J.M., et al. (1989) Cell 56:839-847].

Miles Research Center offers highly attractive compensation commensurate with qualifications and a benefits package including 401(k) and relocation assistance. These positions and the research environment in our new West Haven facility allow for a professional working environment conducive to career development. For immediate and confidential consideration, please send your resume including salary history to: **Dept. CEC-CMB, Miles Inc., 400 Morgan Lane, West Haven, CT 06516**. An Equal Opportunity Employer M/F/H/V.

MOLECULAR PHARMACOLOGIST

The Department of New Lead Pharmacology, an established broad-based group dedicated to drug discovery, at Merck Research Laboratories in West Point, PA, is searching for a senior research molecular pharmacologist to join its efforts to identify and develop novel therapeutics. Primary responsibilities include the application of recombinant DNA technology and pharmacology to strengthen ongoing projects and explore new areas. Laboratory management and supervision of technical associates are integral activities.

Applicants should hold a Ph.D. degree in pharmacology/biochemistry or the equivalent with post-doctoral training in molecular biology. Direct working experience in the cloning and cellular expression of mammalian neurotransmitter/hormone receptors as well as their pharmacological characterization is highly desirable. Demonstrated capacity to carry out creative independent research and enthusiasm for drug discovery is essential. Strong communication skills and the ability to work well within a group toward a common goal are also important qualifications.

Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia. Please send curriculum vitae with cover letter to **Personnel Manager, Ad #D-13, Research Personnel, WP42-2, Merck Research Laboratories, West Point, PA 19486**. EEO/AA/VH/Employer.

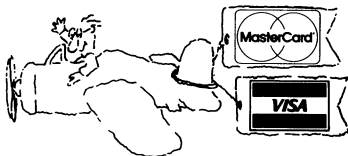
**MERCK**

Research Laboratories

**AMERICA'S MOST
ADMIRED CORPORATION**

EXTENSION AGRONOMIST, Alfalfa Production and Forage Systems. Department of Agronomy and Range Science, University of California, Davis.

Academic career track position, Assistant Extension Agronomist [.80 FTE Cooperative Extension (CE)/.20 FTE Agricultural Experiment Station]. Responsibilities include leadership of statewide extension education programs in alfalfa production and forage systems. Research responsibilities include leadership and coordination in planning and conducting applied research activities related to the ecology, physiology, plant breeding, genetics, pest management, soil/plant nutrition, forage quality and water resource management of alfalfa and forage systems with departmental and interdisciplinary groups. Responsibility for developing programs to meet University regulations, policies and procedures related to civil rights, affirmative action, and equal employment opportunity. Ph.D. or equivalent level of experience in agronomy, or crop physiology, or ecology or breeding is required. Send a statement of interests, curriculum vitae, publication list, reprints of key publications (up to five), copies of undergraduate and graduate transcripts, and the names, addresses, telephone and FAX numbers of at least five references by **September 1, 1992** to: **Dr. James E. Hill, Search Committee Chair, Department of Agronomy and Range Science, University of California, Davis, CA 95616. Telephone: (916) 752-3458. FAX: (916) 752-4361.** The University of California is an Affirmative Action/Equal Opportunity Employer.

**ANNOUNCING
A NEW
SERVICE
FROM
SCIENCE**

Now you can pay for your line classified ad with a credit card — we accept MasterCard and VISA.

Please let us know on your ad order that you wish to take advantage of this service, or ask us for further details.

**SCIENCE Classified Advertising
Tel: 202-326-6555
FAX: 202-682-0816**

BioGenex Laboratories is a leader in the development, manufacture, and worldwide distribution of diagnostic products for the cell pathology market using immunological and DNA-based technology. The following opportunities are currently available:

**VICE PRESIDENT/DIRECTOR
RESEARCH AND DEVELOPMENT**

We are seeking a Senior Scientist with outstanding leadership skills and good appreciation of general business principles to lead our Cell Pathology R & D Group into the next century. The successful candidate will possess a PhD and significant experience in managing teams that have developed cutting edge diagnostic products in the biotechnology or pharmaceutical industries.

SENIOR SCIENTISTS

Our continued growth and profitability has put us in a position to hire a number of Senior R & D Scientists to work on several exciting new product development projects. If you have experience related to optimizing assay protocols for monoclonal or polyclonal antibodies or developing diagnostic detection systems using autostainers, multi tissue blocks, cell lines, controls, AG retrieval, mouse protocols and mouse diluents, we would like an opportunity to tell you about our intriguing opportunities.

BioGenex offers a competitive salary and benefits package. We are an equal opportunity employer. Please send resume and salary history to:

**BioGenex**

Attn: Bud Kreuzer
4600 Norris Canyon Rd.
San Ramon, CA 94583

Postdoctoral Opportunities.

Listed below are a few of the excellent opportunities for conducting research that are now available with leading scientists at the National Institutes of Health.

Cellular Biochemistry / Glycobiology **John A. Hanover, PhD**

The structure of the nuclear pore complex and its role in nuclear transport is being studied at the molecular level. Current efforts are focused on characterization of a class of glycoproteins that have been shown to be essential for nuclear transport. Experience in glycobiology or molecular genetics is preferred. Laboratory of Biochemistry and Molecular Biology (OE-15), NIDDK, Building 10, Room 9B15.

Inflammation / Regulation of Gene Expression **Paul Nettesheim, MD / Anton Jetten, PhD**

Opportunities are available to study the cellular and molecular biology of inflammation. Current studies focus on regulation of growth factors and their receptors; and the biochemistry and molecular control of differentiation of epithelial cells and embryonal carcinoma cells. Current studies focus on the regulation of gene expression during cell differentiation and transcriptional regulation by retinoic acid, nuclear receptors and other transcriptional factors. Laboratory of Pulmonary Pathobiology (OE-15), NIEHS, Building 101, Room D240, PO Box 12233, Research Triangle Park, NC 27709.

Magnetic Resonance Imaging and Spectroscopy **Robert Turner, PhD**

A whole-body 4T magnet is being used to perform magnetic resonance imaging and spectroscopy studies. Rapid progress is being made in high field MR spectroscopy in volunteers and patients and in functional brain mapping using gradient echo MR. Candidates must have a PhD in physics, computer, electrical or electronic engineering, a strong interest in *in vivo* NMR, and experience in the development and application of innovative hardware. Laboratory of Cardiac Energetics (OE-15), NHLBI, Building 10, Room B1D161.

Molecular Neurobiology **Stanley I. Rapoport, MD**

Molecular biological aspects of the brain are being studied in relation to development and aging, neuroplasticity, and Alzheimer's disease. The successful candidate will be expected to apply recombinant DNA techniques and/or *in situ* hybridization to address differences in gene expression in health and disease. Laboratory of Neurosciences (OE-15), NIA, Building 10, Room 6C103.

Prokaryotic Gene Expression Regulation **Robert Weisberg, PhD**

Work on the mechanism of transcription termination and its control in prokaryotes has recently led to the discovery of a novel mechanism of termination control. Identification of the proteins required, their targets, and how they interact is the focus of current research efforts. Experience in molecular genetics, enzymology or recombinant DNA technology is preferred. Laboratory of Molecular Genetics (OE-15), NICHD, Building 6B, Room 308B.

Vascular Cell Differentiation **Edward Lakatta, MD**

In vitro and *in vivo* studies are used to study the differentiation of vascular smooth muscle cells and endothelial cells during blood vessel formation. The factors which govern the growth of these cells and the synthesis and remodelling of extracellular matrix during aging and following mechanical injury to the vessel walls are being studied. Candidates with experience in immunohistochemistry, *in situ* hybridization and electron microscopy will be given preference. Laboratory of Cardiovascular Science (OE-15), NIA, Gerontology Research Center, 4940 Eastern Avenue, Baltimore, MD 21224.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (1,3014922221 or 1,8003582221). The settings for modem access are "7,Even,1". When connected to NIH, type in "vt100" at the connect message, "F5E" at initial, and "AJL1" at account.

Those interested in receiving information on other postdoctoral opportunities in NIH research laboratories, as well as information on clinical training opportunities, may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

To Apply

If you hold a PhD, MD, or equivalent degree and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



National Institutes Of Health

9000 Rockville Pike, Bethesda, MD 20892

Equal Opportunity Employer

VICE PRESIDENT FOR BIOMEDICAL RESEARCH

The Association of American Medical Colleges seeks a Vice President for Biomedical Research reporting directly to the President as a member of the executive staff. Areas of responsibility of the Division of Biomedical Research encompass development of research policy; assessment of needs and policies governing research training; issues related to the financing and management of research and the research infrastructure, including plant, equipment, human subject regulations, and the use of animals; technology transfer; scientific integrity; and relationships between academic medical centers and industry. The incumbent is responsible for the program and activities of the Council of Academic Societies, the component of the AAMC governance representing medical center faculty through 92 professorial and specialty organizations. Candidates should possess an M.D. or Ph.D. and have a strong background as an investigator in the biomedical and behavioral sciences. Experience at an academic medical center and knowledge of the National Institutes of Health through service on study sections or committees are desirable. Applications, including C.V. and bibliography, will be received through July 31, 1992. Send applications to:

Robert G. Petersdorf, M.D.
President
Association of American Medical Colleges
2450 N Street, N.W.
Washington, D.C. 20037-1126
*An Equal Opportunity/
Affirmative Action Employer*

Assistant Professor—Plant Developmental Physiology: The Department of Forestry, North Carolina State University, is seeking an individual for a 12-month tenure track research position. The primary duty of this newly-created faculty position is to develop a research program to elucidate the process of adventitious root initiation and development in loblolly and slash pines. This research is part of a larger interdisciplinary project leading to the development of rooted cutting technology. A consortium of forest product companies has pledged research support to the project for a minimum of four years. The scientist is expected to expand the research support base through outside grants. Qualifications include a Ph.D. in plant physiology, plant biochemistry, or closely related field. Experience, post Ph.D., directly related to developmental plant physiology is highly desirable. Candidates should have demonstrated the ability to direct and conduct independent research. Knowledge of contemporary plant physiology/biochemistry skills, including plant molecular biology/genetics is highly desirable. Experience with propagation or production of woody plants and with design and analysis of field studies would be beneficial. We are especially seeking someone who has demonstrated the ability to work within a multi-disciplinary research team environment. Candidates should possess strong personal communication skills. The salary, provided by the Department of Forestry, will be competitive for the Assistant Professor rank. Qualified applicants should apply with a letter of application, resume, and at least three letters of reference to: Dr. Robert J. Weir, Dept. of Forestry, Box 8002, North Carolina State University, Raleigh, NC 27695-8002. Deadline for submission of application materials is August 1, 1992. *NCSU is an EO/AA employer.*

POSITIONS OPEN

HEAD OF CLINICAL BIOSTATISTICS, DEPARTMENT OF ONCOLOGY, MCGILL UNIVERSITY. We are seeking an independent research investigator who would provide biostatistical input into a rapidly growing clinical trials operations with a strong laboratory interface. We would also expect this person to supervise and manage ongoing support services for clinical trials. Applicant should possess either a Ph.D. or M.D. degree. Candidates would be acceptable with degrees in either computer science (providing they have a substantial background in clinical trials methodology) or biostatistics or epidemiology. Please submit a letter of interest, curriculum vitae, and the names and addresses of three references by 31 July 1992 to: **Dr. Brian Leyland-Jones, Chairman, Department of Oncology, McGill University, 3655 Drummond, #701, Montreal, Quebec, Canada, H3G 1Y6.** *In accordance with Canadian Immigration regulations, this ad is directed to Canadian citizens and permanent residents. McGill University is committed to equity in employment.*

BIOLOGY. A tenure-track, undergraduate faculty position beginning late August 1992 to teach service and major courses such as principles, botany, genetics, ecology/field biology. M.A. in biology required, Ph.D. preferred. Must be compatible with the mission of the small, liberal arts, Church-related college, including an emphasis on teaching/advising and a willingness to function as a generalist within a two-person department. Rank and salary dependent upon qualifications. Send letter of application, résumé and credentials by 26 June 1992 to: **Academic Dean, Midland Lutheran College, Fremont, NE 68025.** *An Affirmative Action/Equal Opportunity Employer; women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION IN NEUROSCIENCE

To study CNS receptor and neuropeptide changes following chronic neuroleptic treatment of rats using in situ hybridization, receptor autoradiography and other molecular biological techniques. **Dr. Ian Creese, Center for Molecular and Behavioral Neuroscience, Rutgers-Newark, 197 University Avenue, Newark, NJ 07102.** *Equal Opportunity Employer/Affirmative Action.*

POSTDOCTORAL POSITION multi-year appointment available immediately to study UV-B-induced DNA damage and mechanisms of DNA repair in larval marine fishes. Position administered through the University of California, Santa Barbara, with work at the SWFSC located on the grounds of the Scripps Institution of Oceanography in La Jolla, California. Strong background in molecular biology or biochemistry and interests in DNA repair processes, photobiology or larval fish biology recommended. Send curriculum vitae and names of three references to: **Dr. Russell D. Vetter, Southwest Fisheries Science Center, P.O. Box 271, La Jolla, CA 92093.** Telephone: 619-546-7125, FAX: 619-546-7003.

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. To study the role of the microtubule cytoskeleton in cell motility and morphogenesis. The project will focus on control of microtubule dynamics by growth factors and will combine biochemical, immunological, and video-based microscopy approaches. Send curriculum vitae and three letters of reference to: **Dr. Gregg G. Gundersen, Department of Cell Biology and Anatomy, Columbia University College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032.** *Equal Opportunity Employer/Affirmative Action.*

TWO POSTDOCTORAL POSITIONS are available to study: (1) the molecular mechanisms of cell-to-cell movement of plant viruses and (2) the biochemical and molecular genetics of plant virus glycoproteins and the cellular events involved in processing the glycoproteins. Candidates with molecular and biochemical experience preferred. Applicants should submit curriculum vitae, reprints, and three letters of reference to: **Dr. C. M. Deom, Department of Plant Pathology, Miller Plant Science Building, University of Georgia, Athens, GA 30602-7274, FAX: 706-542-1262.** *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION AVAILABLE IN PHYSIOLOGY. Position available to study the role of calcium channel blockers in GI tract smooth muscle contraction using pharmacological, biochemical, and electrophysiological techniques. Experience in calcium channel research and/or control of smooth muscle contraction required. Competitive salary and benefits. Please send curriculum vitae, statement of research interests, and names of three references, to: **Dr. James P. Ryan, Department of Physiology, Temple University School of Medicine, Philadelphia, PA 19140.** FAX: 215-221-4003. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available to study mechanisms of excitotoxic neurodegeneration in vitro. Techniques to include primary nerve cell culture, receptor/channel pharmacology, immunocytochemical staining, electrophysiology, and Ca²⁺ imaging and flux studies. Salary commensurate with experience. Send résumé, letter stating research interests, and names of three references to: **John H. Weiss, M.D., Ph.D., Department of Neurology, 154 Med Surge I, University of California, Irvine, Irvine, CA 92717.** Refer to position #92-1. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION, UNIVERSITY OF CALIFORNIA—SAN FRANCISCO, to study the role of a newly discovered family of integral membrane proteins in cell-cell interactions and cell signaling. Ph.D. with strong background in cell biology, in situ hybridization and molecular biology preferred. The environment is highly stimulating, offering competitive salaries. Résumé, publications, names and numbers of three references to: **Robert Nissenson, Ph.D., VA Medical Center (111N), 4150 Clement Street, San Francisco, CA 94121.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately at the University of California, San Francisco (UCSF), for Ph.D. in chemistry or biochemistry for studies of the enzymatic mechanism of cytochrome P-450. Project requires knowledge of spectroscopic and kinetic techniques. Skills in molecular biology optional. Send application and have three letters of reference sent to: **L. Waskell, M.D., Ph.D., UCSF, VA Medical Center, Department of Anesthesia, 4150 Clement Street, San Francisco, CA 94121.** *Equal Opportunity/Affirmative Action Employer.*

ATTENTION SCIENCE ADVERTISERS \$40 SPECIAL

Place your classified ad in any May–August 1992 issue of SCIENCE and get double exposure. We'll display the same position announcement at the **Employment Exchange** during the **AAAS Pacific Division Meeting or Science Innovation '92** for only \$40 more. That's less than the cost of one additional line.

When you place your classified ad in SCIENCE, simply let us know that you want to take advantage of the \$40 Special and we'll do the rest. Please specify the meeting of your choice or both meetings.

The **Employment Exchange** will take place at the **AAAS Pacific Division Meeting, 21–24 June 1992**, at the University of California, Santa Barbara campus; followed by **Science Innovation '92, 21–24 July 1992**, at the Moscone Convention Center in San Francisco, California. Thousands of scientists in various disciplines have been invited to participate. Act fast and you can reach this unique pool of candidates.

For more information on how you can interview candidates on-site please refer to the 8 May 1992 issue of Science, or contact Jacquelyn Roberts at (202) 326-6737, FAX: (202) 842-1065.

Public Health Service • National Institutes of Health • Bethesda, Maryland
A Senior Executive Service Vacancy

DIRECTOR, Warren G. Magnuson Clinical Center

THE POSITION: Director of the Warren G. Magnuson Clinical Center, the world's largest hospital devoted solely to clinical research. The Clinical Center is the cornerstone of the National Institutes of Health, one of the world's premier biomedical research organizations. The Director also serves as the senior advisor to the Director, NIH on matters relating to clinical care, clinical research and hospital administration.

THE CHALLENGE: Leadership of a 540-bed research hospital with a budget in excess of \$220 million and over 2,400 employees. Current research involves numerous clinical studies utilizing approximately 600 physicians. The Clinical Center is home to state of the art medical departments and training programs, including transfusion medicine, diagnostic radiology, rehabilitation medicine, nuclear medicine, critical care medicine, and clinical pathology. The Director will direct NIH programs concerning experimentation with human subjects, standards for patient care, and promotion of clinical research.

The NIH is developing plans to build a new hospital incorporating the most advanced concepts of research and patient care. The Director will play a critical role in designing, building and operating this new center.

THE IDEAL CANDIDATE: Demonstrated experience managing a complex research organization, such as a senior level position providing patient care services or managing research, administrative or medical support programs. M.D. or Master's degree in hospital administration is preferred.

SALARY RANGE: \$90,000 to \$112,100, plus a physician's bonus of up to \$20,000. The Director is eligible to be considered for a performance bonus of 5-20 percent of base pay each year. A recruitment bonus of up to 25 percent of base pay may be available to a non-federal candidate, subject to individual approval; a relocation bonus of up to 25 percent of base pay may be available to a permanent federal employee who must relocate, subject to individual approval.

For more information, contact Ms. Susan Fishbein in the Clinical Center Personnel Office at (301) 496-6895. The following forms are required: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography, and proof of licensure, if an M.D. These must be submitted to:

Director
Division of Personnel Management
The National Institutes of Health
Building 1, Room B1-60
9000 Rockville Pike
Bethesda, Maryland 20892



Applications must be received by close of business:
August 24, 1992.

Selection for this position will be based solely on merit, without discrimination for non-merit reasons such as race, color, religion, sex, national origin, politics, marital status, physical or mental handicap, age, or membership or non-membership in an employee organization.

NIH is an Equal Opportunity Employer

UNIVERSITY OF COLORADO DIRECTOR, INTELLECTUAL RESOURCES PROGRAM

The University of Colorado invites applications and nominations for the position of Director of the University's Intellectual Resources Program.

Responsibilities:

Overall leadership, supervision, and oversight of the University's Intellectual Resources Program.

Manages the patenting and licensing activities, which include building awareness of technology transfer policies, procedures, and achievements throughout the University; encouraging, facilitating, and evaluating invention disclosures; coordinating the patent application process with external firms; marketing technology worldwide; negotiating licensing agreements with industry; and forming new ventures to commercialize University technology.

Coordinates the four-campus activities for the Intellectual Resources Program within the University of Colorado system.

Represents the University within the State, national and international business community regarding the Intellectual Resources Program.

To develop strategic plans and provide leadership within the University community regarding the identification, evaluation, protection, and exploitation of the University's intellectual resources.

Qualifications:

The successful candidate must have substantial experience with technology-based companies or with a successful university technology transfer program. Experience should include exposure to patents and their role in corporate strategies. Knowledge and skills in marketing intellectual property, negotiating licenses, and managing patent attorneys are important. Candidates must demonstrate an understanding of and empathy for the research mission of the University, as well as the ability to work effectively with faculty, staff, administrators and the business community. An advanced degree(s) in science, engineering, business or law is desirable.

The Search Committee will begin evaluating applications and nominations on July 15, 1992. Send resume and letter of application discussing experience and relevant accomplishments to:

Director of Intellectual Resources Program Search Committee
University of Colorado
Campus Box 462
Boulder, CO 80309-0462

The University of Colorado has a strong institutional commitment to the principles of diversity in all areas. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.



Diacrin, Inc. is an exciting company that employs cell transplantation to develop treatments for diseases such as Type I diabetes and muscular dystrophy. Our transplantation technology does not require immunosuppression and is applicable to many other human diseases. We are uniquely positioned to collaborate closely on these projects with scientists and clinicians located next door at Mass General Hospital East.

We are expanding our current research team to include:

Molecular Immunologist: This Ph.D. level scientist will lead a research team in the study of the molecular mechanism(s) involved in the induction of graft tolerance. In parallel, this individual will play a key role in the development of novel methods to re-educate T lymphocytes during autoimmune disease.

Developmental Biologist: This Ph.D. level scientist will lead a program that will study the molecular mechanisms involved in the differentiation of embryonic stem cells into specific cell types.

A comprehensive benefits package, including a competitive salary, medical and dental insurance, 401K program, etc. is being offered. If you are a qualified scientist with the motivation and creativity necessary to direct the research in either of these two exciting areas, please forward your resume to: **Personnel Department, Diacrin, Inc. Building 96, 13th Street, Charlestown, MA 02129; Fax: 617-241-8780.** We are an equal opportunity employer.

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS IN EUKARYOTIC TRANSCRIPTION immediately available to study initiation and regulation mechanisms of ribosomal and 5S RNA expression. Experience in gene cloning and protein purification desired. Send résumé and three letters of recommendation to: **Marvin Paule, Department of Biochemistry, Colorado State University (CSU), Fort Collins, CO 80523. Telephone: 303-491-5576, FAX: 303-491-0494. CSU is an Equal Opportunity Employer/Affirmative Action Employer.**

Three NIH-funded **POSTDOCTORAL POSITIONS** to study pharmacology and biochemical and genetic correlates of action of antiproliferative drugs. Experience in pharmacokinetics, pharmacodynamics, tissue and cell cultures, computer modeling, molecular pharmacology and/or molecular biologic techniques desired. Salary is negotiable. Send curriculum vitae and three letters of references to: **Dr. Jessie L.-S. Au, College of Pharmacy, The Ohio State University, 500 West 12th Avenue, Columbus, OH 43210.**

POSTDOCTORAL POSITIONS. Available for summer/fall 1992. One position to study the molecular biology of eukaryotic DNA repair proteins and genes. Candidates should have Ph.D. in biochemistry, molecular biology or related area. A second position to study DNA structures containing oxidative and radiation-induced damages. Experience with NMR and/or computer-based molecular modeling techniques desirable. Send curriculum vitae and names and addresses of three references to: **Dr. Paul Doetsch, Department of Biochemistry, Emory University School of Medicine, Rollins Research Center, Atlanta, GA 30322. Emory University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to carry out investigations of the enzymology of antibiotic biosynthesis in *Streptomyces*. Previous experience with enzyme assays and enzyme isolation required; previous experience with *Streptomyces* desirable. Send curriculum vitae and the names and telephone numbers of three references to: **Professor Ronald Parry, Department of Chemistry, Rice University, P.O. Box 1892, Houston, TX 77251.**

FACULTY POSITIONS DEPARTMENT OF MICROBIOLOGY NEW YORK UNIVERSITY SCHOOL OF MEDICINE

The Department of Microbiology of NYU School of Medicine is seeking to fill two tenure track positions at the Assistant/Associate Professor level. We are particularly interested in attracting outstanding researchers with a Ph.D. or M.D. degree working in the fields of animal virology, oncogenes, growth factors and their receptors, and microbial pathogenesis, but will also welcome applications from individuals interested in the molecular analysis of gene expression and function in general. Participation in the Department's graduate and medical students teaching is expected. Salary is open and dependent upon experience and qualifications, and start-up funds are available.

The Department of Microbiology occupies newly renovated laboratory space in the Medical Science Building at NYU Medical Center, and comprises at present a group of faculty with diverse research interests including oncogenic viruses, the mechanism of action of cytokines and growth factors, mechanisms of microbial pathogenicity and antimicrobial host defenses, regulation of gene expression in bacteria and animal cells, molecular genetics, etc. The Department has an active graduate training program and also participates in the Kaplan Cancer Center and the Center for AIDS Research. Both of these Centers are interdisciplinary NIH funded programs.

Applicants should send their curriculum vitae, names of three references, and a brief statement of Research interests to: **Dr. Claudio Basilico, Professor and Chairman, Department of Microbiology, NYU Medical Center, 550 First Avenue, New York, NY 10016.**

NYU is an Equal Opportunity Employer.

POSITIONS OPEN

GASTROENTEROLOGY—POSTDOCTORAL POSITION. Available immediately to study the molecular mechanisms that regulate the expression of intestinal transport proteins. Ph.D. with experience in molecular biology and tissue culture desirable. Send curriculum vitae and names of three references to: **Alice Chow, M.D., Emory University School of Medicine, Division of Digestive Diseases, P.O. Drawer AL, Atlanta, GA 30322. Telephone: 404-727-5638; FAX: 404-727-5767. Emory University is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION available to study repair of radiation-induced DNA damage in human cells. Primary research involves characterization of human enzymes, that repair radiation- and bleomycin-induced DNA strand breaks [see *Nucleic Acids Research* 20, 2573-2580 (1992)]. Other research areas include mechanistic studies of DNA repair inhibitors, modulation of cellular DNA repair by gene expression vectors, and the role of DNA synthesis in cellular radioresistance. Experience in DNA damage and repair, enzymology, or radiochemistry is required. Interested individuals should send curriculum vitae and names of three references to: **Dr. Timothy Jorgensen, Department of Radiation Medicine, Georgetown University Medical Center, 3800 Reservoir Road, N.W., Washington, D.C. 20007. Georgetown University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCHER RESEARCH ASSISTANT PROFESSOR

Non-tenured position available immediately to study role of IGF-1, its receptors and binding proteins in development, plasticity and disease of the nervous system. Mouse models of human neurodegenerative diseases will be studied along with tissue and/or body fluid samples from patients with ALS (Lou Gehrig's disease). Experience in molecular neurobiology and/or endocrinology essential. Position identified as the CEPHALON Research Fellow. Send curriculum vitae, letter of interest along with names, addresses and telephone numbers of four references to: **Dr. Barry W. Festoff, Neurobiology Research Lab (151), University of Kansas/VA Medical Center, 4801 Linwood Boulevard, Kansas City, MO 64128. An Equal Opportunity Employer.**

IUCN PROGRAMME OFFICER: AFRICAN ELEPHANT CONSERVATION

Full-time position based in Nairobi working with the African Elephant Specialist Group of IUCN's Species Survival Commission. AESG is a technical advisory body on elephant conservation issues to governments, conservation organizations and donors in Africa. Responsibilities include: liaison with governments, NGO's, and research institutions; identify priority issues and coordinate AESG responses; assist the co-chairs, newsletter editor, and database manager of the AESG, and maintain correspondence with AESG members and donors; oversee daily operations of the office. The successful candidate should have a graduate degree (Ph.D. preferred), experience in wildlife conservation in Africa, strong writing skills, and fluency in English and French. Initial appointment is one year, with extensions probable. Applicants should submit their curriculum vitae by 15 July 1992 to the Head of Personnel, IUCN, Avenue du Mont-Blanc, CH-1196 Gland, Switzerland.

IUCN SPECIES AND PROTECTED AREAS PROGRAMME OFFICER Full-time position based in Quito, Ecuador working with IUCN's Species Survival Commission and Commission on National Parks and Protected Areas. Tasks include: liaison with IUCN members in the region; providing linkages between the 2 programmes; liaison with governments and NGO's; promoting production of publications; promoting implementation of programme recommendations; facilitating regional data management for data on species and habitats. Candidate should have a graduate degree; significant applicable field experience; minimum of 5 years professional experience in S. America; fluency in Spanish, English and preferably Portuguese; and good writing skills. Applicants should submit their curriculum vitae, names of three referees, and a writing sample by 15 July 1992 to the Head of Personnel, IUCN, Avenue du Mont-Blanc, Ch-1196 Gland, Switzerland.

POSITIONS OPEN

POSTDOCTORAL POSITION ECOLOGICAL MODELING

The Virginia Institute of Marine Science of the College of William & Mary invites applicants for a postdoctoral research position in ecological modeling. A Ph.D. in oceanography, marine science, mathematical ecology or a related quantitative science is required. The successful applicant must have experience with ecological models, be proficient in a higher level programming language, and have a working knowledge of PC-based networks. The applicant should also have a broad based knowledge of ecological concepts and biological/ecological processes characteristic of estuaries and the coastal ocean. The appointment is for one year with renewal contingent on funding. The expected salary is \$30,000 per year with the earliest start date being 1 July 1992.

Submit a résumé, a list of three references, and a statement of research interests to: **Dr. Richard L. Wetzel, College of William & Mary, Virginia Institute of Marine Science, Gloucester Point, VA 23062.**

The College of William & Mary is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

POSTDOCTORAL POSITIONS available to study somatostatin receptor subtypes. Approaches involve the mutagenesis of cloned receptors, in situ hybridization, immunological, electrophysiological and behavioral techniques to study the structure and function of these receptors. Applicants should send their curriculum vitae and two letters of reference to: **Dr. Terry Reisine, Department of Pharmacology, University of Pennsylvania, 36th Street and Hamilton Walk, Philadelphia, PA 19104.**

POSTDOCTORAL POSITION

Two-year position available to study the role of Lp(a) in atherosclerosis. Projects include isolation of Lp(a) from human lesions to determine molecular variability, intralosomal modifications including oxidation, and interaction with connective tissue matrix. Send curriculum vitae and references to: **Joseph H. Rapp, M.D., Cardiovascular Research Institute, Box 0130, University of California, San Francisco, CA 94143. An Equal Opportunity Employer.**

Calendar of Upcoming Meetings

SCIENCE will be distributed to scientists attending the following meetings:

HPLC

14 to 19 June 1992, Baltimore
Issue date: 5 June 1992

Protein Society

25 to 29 July 1992, San Diego
Issue date: 10 July 1992

Science Innovations

21 to 25 July 1992, San Francisco
Issue date: 17 July 1992

Electron Microscopy Society of Am.

17 to 20 August 1992, Boston
Issue date: 31 July 1992

**Your classified ad will enjoy
BONUS DISTRIBUTION
at these events.**

**Deadline for line classified ads:
15 days prior to issue date at 10:00 a.m.
Call for display ad deadlines.**

**SCIENCE Classified Advertising
Telephone: 202-326-6555
FAX: 202-682-0816**

National Institutes of Health

MOLECULAR GENETICIST

Research Scientist/Senior Postdoctoral Fellow

The Laboratory of Cellular Development and Oncology, National Institute of Dental Research, seeks an outstanding candidate for a research scientist or senior postdoctoral fellow position. The Laboratory will give preference to individuals with the potential to develop a program focusing on the molecular aspects of genetic diseases with a craniofacial/oral component. Applicants should have at least 3 years postdoctoral training and research experience in genetics and molecular biology. A substantial record of publication in these areas is required. Starting salary will be commensurate with qualifications and experience. Interested candidates should submit a curriculum vitae, several reprints, summary of research interests and names of three references **no later than July 31, 1992.**

Material should be sent to: **Faye M. Harbrant, Personnel Management Specialist, National Institute of Dental Research, National Institutes of Health, Bldg. 31, Rm. 2C23, 9000 Rockville Pike, Bethesda, MD 20892.**

NIH is an Equal Opportunity Employer

Research Investigators

The Bristol-Myers Squibb Pharmaceutical Research Institute in Seattle (formerly ONCOGEN), performs research dedicated to pursuing novel approaches to the development of therapeutic products in the areas of immunology, infectious diseases and cancer. We are currently seeking two Research Investigators for our Biological Process Research Dept.:

- Perform research optimizing cell growth conditions and product production. Experience with biochemical analytical techniques, HPLC and EIA's is mandatory. Management opportunities and growth within the dept. exist. Position requires interaction within multi-disciplinary bioprocess group and among other research groups.

Candidate should possess a Ph.D. in Cell Biology, Biochemistry, Molecular Biology, or related field. Prefer 2-4 years post-doctoral experience which involved operating small scale-up bioreactors producing monoclonal antibodies and/or growth factors. **Position #92-0477.**

- Develop methods for purification and analysis of recombinant proteins from a variety of sources. Experience with refolding of proteins produced in an insoluble state is required. The successful candidate will have the ability to interact in a collaborative environment with scientists responsible for expression, fermentation, analysis and formulation.

Must possess a Ph.D. in Biochemistry or related field with minimum two years postdoctoral experience. **Position #92-0471.**

We offer a creative research environment, competitive salaries, an excellent benefit package and relocation assistance. Our facility offers open and well-equipped laboratories overlooking beautiful Puget Sound and the Olympic Mountains from our downtown site. Please forward your resume to: **Bristol-Myers Squibb, Human Resources Dept., 3005 1st Avenue, Seattle, WA 98121.** Please note the position reference number. Equal Opportunity Employer, M/F/D/V.



Bristol-Myers Squibb Company



Sphinx Pharmaceuticals Corporation is a rapidly growing company dedicated to the discovery and development of novel therapeutics for human disease based on interactions with key intracellular enzymes involved in signal transduction pathways.

CANCER BIOLOGY/INFLAMMATION SCIENTIST

Needed to join active drug development team applying in vivo and in vitro models to explore the effects of agents that modulate various signal transduction pathways in human leukocytes and tumor cells in vitro and in murine models of cancer, autoimmune disease and psoriasis. Ph.D. with 3-5 years industrial research experience and demonstrated leadership skills. **Position 186**

CARDIOVASCULAR/PULMONARY SCIENTIST

Needed to join ongoing program and facilitate further development of capabilities to apply in vivo rodent models for testing therapeutic agents. Ph.D. with 3-5 years industrial experience in guinea pig and rat models of cardiac arrhythmias, hypertension and/or myocardial reperfusion injury, bronchoconstriction, or asthma. Organ and tissue bath experience such as Langendorf preparations and excellent computer skills essential. **Position 187**

Sphinx offers competitive compensation, comprehensive benefits and relocation plan, and excellent living conditions in the Research Triangle area of North Carolina. For confidential consideration, please forward your curriculum vitae, current salary, and names of three references, indicating the position number for which you are responding, to: **SPHINX PHARMACEUTICALS CORPORATION, P.O. Box 52330, Durham, NC 27717.** An Equal Opportunity Employer.

SPHINX
PHARMACEUTICALS
CORPORATION

Research Faculty Opportunity

Position available as Assistant/Associate Professor of Research Ophthalmology at the School of Medicine of the University of Southern California. The Department of Ophthalmology is located at the Doheny Eye Institute on the USC Health Sciences Campus. Incumbent to participate in ongoing research project concerned with diagnosis and correction of abnormalities of the cornea. Position requires both measurement and theoretical skills.

Project has ongoing collaborations with faculty in the School of Engineering for the University; a joint appointment in the Department of Physiology and Biophysics in the School of Medicine is possible.

Please direct inquiries to: **Stephen J. Ryan, M.D., Chairman, Dept. of Ophthalmology, USC School of Medicine, 1450 San Pablo St., Los Angeles, CA 90033.** Equal Opportunity Employer.



Doheny
Eye Institute

Southern California Opportunities

Alpha Therapeutic Corporation is a leader in the delivery of full performance pharmaceuticals derived from human blood plasma products. Our focus is on providing the safest and highest quality products to meet patient-specific needs. Our growth has created the following opportunities:

Quality Control Scientist Los Angeles Facility

This position is responsible for developing and fine tuning bio-analytical techniques that will lead to validated assay procedures as well as supervising the Analysts that will be performing the tests.

Qualified candidates will possess a Ph.D./MS in Biological Sciences (Chemistry or Biology), 5+ years experience in bio-analytical chemistry and a minimum of 2 years supervisory experience. Knowledge of R&D, QC, analytical chemistry, biology, microbiology, statistical methods, analytical instrumentation, assay development, validation procedures, chemistry/biology lab techniques and PC skills required.

R&D Principal Scientist Industry Facility

This position is responsible for column chromatography assay development and other techniques related to protein purification, writing and presenting technical reports, and daily supervision of Technicians.

Qualified candidates will possess an MS and/or Ph.D. in Biochemistry or Biological Sciences, 2-5 year of industrial or research laboratory experience, knowledge of protein purification, and the ability to handle major equipment related to protein purification and chemistry. Computer skills and documentation experience are required.

Alpha offers competitive salaries complemented by an attractive benefits package. Please submit resume with salary history, indicating your position of interest, to: ALPHA Therapeutic Corporation, Mail Stop BB-740, Human Resources Dept., 5555 Valley Blvd., Los Angeles, CA 90032. AA/EOE.



DEPARTMENT OF BIOLOGY, QUEEN'S UNIVERSITY

The Department of Biology at Queen's University invites applications from Biologists who could be sponsored for an N.S.E.R.C. Women's Faculty Award. Preference will be given to applicants working in the following fields:

- 1) **Developmental Genetics/Cell Biology**
- 2) **Plant Physiology**

The intent is to negotiate a bridging appointment to a tenure-track position for the successful candidate.

Qualifications: The main criteria for endorsement will be academic excellence and the staffing requirements of the Biology Department. Qualifications include a Ph.D. and published evidence of excellent research ability. The successful candidate will be expected to develop a vigorous research program and should be an enthusiastic and competent teacher.

Expected date of appointment: July 1, 1993 (or as negotiated).

Application deadline: August 21, 1992.

Applications (which should include a curriculum vitae and statement of current and prospective research interests) plus three letters of reference should be sent to: **Dr. Gerald P. Morris, Head, Department of Biology, Queen's University, Kingston, Ontario, K7L 3N6, Canada.**

[In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Queen's University has an employment equity program and encourages applications from all qualified candidates, including women, aboriginal peoples, people with disabilities and visible minorities. Queen's University is willing to help the spouse of a new appointee seek suitable employment.]

RESEARCH SCIENTIST IMMUNOLOGY

Miles Pharmaceuticals, Biological Products Division, a leading San Francisco bay area manufacturer of therapeutic biological products, has an immediate opening for a research scientist with training in immunology. The successful candidate will join a multi-disciplinary group in the Department of Cellular and Molecular Biology Research. The focus of this team is the identification of novel biological therapeutics and product development through monoclonal antibody and recombinant DNA technologies. We are looking for a highly motivated individual with a broad scientific background and specialized expertise in human monoclonal antibody technology or cytokine biology.

Qualifications are a relevant Ph.D./M.D. plus at least 4 years postdoctoral experience. A demonstrated ability to conduct independent and creative research is required.

Send resume and job history to JoAnn McHugh, P.O. Box 1986, Berkeley, CA 94701. EOE/AA.



TOXICOLOGIST

Schering-Plough HealthCare Products is a growing \$700 million division of Schering-Plough Corporation and one of the top five healthcare products companies in the U.S. We are currently seeking a Toxicologist to work on our OTC product line which includes such familiar names as Coppertone, Gynelotrimin, Afrin, Correctol and Drixoral.

In this Memphis, TN based position, you will set up safety studies including writing protocols, evaluating results and preparing reports plus analyze literature to assess safety of chemicals and products.

Requires a PhD in Toxicology or related discipline and broad knowledge of toxicology and toxicology testing. Previous experience is preferred. In addition, good communication and decision-making skills are required.

We offer an excellent salary and benefits package. If you are seeking an opportunity with an industry leader, please forward your resume to: **Schering-Plough HealthCare Products, Human Resources, Dept. 517SG, 3030 Jackson Ave., Memphis, TN 38151.** An Equal Opportunity Employer, M/F/H/V.



Schering-Plough
HealthCare Products

Ribozyme Pharmaceuticals, Inc., leading the development of ribozyme-based pharmaceutical and agricultural products, is establishing a multidisciplinary team of creative, talented scientists to expand our efforts at new research facilities in Boulder, CO. Qualified applicants are sought for positions at all levels of education. Immediate openings include the following:

ENZYMOLGY Qualified applicants should have an MS or BS with equivalent experience in biochemistry, chemistry, molecular biology or related fields. Experience in enzyme kinetics assays, PCR, RNA transcription and purification and PAGE is desirable.

CHEMISTRY Nucleic Acid Chemist: Qualified applicants should have an MS or PhD in synthetic organic chemistry with at least three years of experience in nucleic acid chemistry and solid phase synthesis of oligonucleotides. Experience in the operation and maintenance of DNA/RNA synthesizers is required and experience in liquid chromatography, including preparative chromatography, electrophoresis and capillary electrophoresis is desirable.

DRUG DELIVERY Cell Biologist: Qualified applicants should have an MS or BS with equivalent experience in cell biology or biochemistry. Experience in tissue culture of primary or transformed cells, electrophoresis, subcellular fractionation and fluorescence microscopy is desirable.

Biochemist: Qualified applicants should have an MS or BS with equivalent experience in biochemistry or chemistry. Experience in chromatography, electrophoresis, fluorescence spectroscopy and chemical synthesis is desirable.

Drug Delivery: Qualified applicants should have a PhD in organic chemistry, biochemistry, biophysics or pharmacology. Primary responsibilities will focus upon the development of controlled release drug delivery systems for use with synthetic RNA and RNA analogs.

CELL BIOLOGY Cell Biologist: Qualified applicants should have an MS or BS with equivalent experience in cell biology or virology. Experience in tissue culture of transformed or primary cells is required and experience in electrophoresis, RNA/DNA/protein purification and virus culture is desirable.

Molecular Biologist: Qualified applicants should have an MS or BS with equivalent experience in molecular biology, microbiology or biotechnology. Experience in electrophoresis, *in vitro* transcription/translation systems and nucleic acid metabolism is desirable.

Molecular Biologist: Qualified applicants should have a PhD in molecular biology, microbiology or related areas. Primary responsibilities will focus upon the development of ribozyme expression systems for use in selected cell types.

We offer a competitive salary and benefits package. For consideration, please send resume to: **Dr. Kenneth Draper, Ribozyme Pharmaceuticals, Inc., 26101 Miles Road, Cleveland, OH 44128; fax (216) 591-1011. We are an Equal Opportunity Employer.**

UNIVERSITY OF VIRGINIA

Director Molecular Biology Institute and Markey Center

Nominations and applications are invited for the Directorship, which can start during the 1992-93 academic year, later if necessary. The Institute and the Center, managed conjointly at present, command significant resources. The Institute is supported primarily with university funds. The Markey Center for Research on the Molecular Biology of Cellular Signaling Processes is funded by a five-year grant from the Markey Charitable Trust. Core space of some 12,000 square feet and core facilities for the Center are located in the School of Medicine. The more than fifty molecular biologists comprising the parent Institute are members, however, of departments of the College of Arts and Sciences as well as of the School of Medicine. All members hold regular faculty appointments, as will the new Director.

Candidates should have a strong research program in one of the molecular subdisciplines of signaling, e.g., membranes and receptors, signal transduction, genome-level processes, molecular structure. Candidates should be eligible for the rank of Professor. Scientific management experience would be helpful but is not a prerequisite for appointment. Administrative arrangements, salary, and departmental affiliation are flexible and will depend upon experience.

Applicants should provide a curriculum vitae, a full bibliography, and the names of three referees. Nominations may be offered by letter. Please address:

**Markey Search Committee
Box 56, MR-4 Building
University of Virginia
Charlottesville, VA 22908**

Applications should be complete by July 31, 1992; but the search will continue, and additional applications will be accepted as necessary, until the position is filled.

*The University of Virginia is an Equal Opportunity, Affirmative Action Employer.
Women and minorities are encouraged to apply.*

FACULTY POSITION TENURE TRACK TERRY FOX CANCER RESEARCH LABORATORIES

Applications are invited for a tenure-track faculty position in the recently established Terry Fox Cancer Research Laboratories located within the Division of Basic Medical Sciences, Faculty of Medicine, Memorial University. Applicants must possess a doctorate and relevant experience in one of the following areas; gene expression, developmental molecular biology or intercellular/intracellular signalling. The successful candidate will be expected to develop an independent, externally funded research programme but will be encouraged to participate in collaborative projects with other members of the Terry Fox Laboratories. The laboratories are modern, well equipped and provide over 5,000 sq. ft. of communal space for four investigators. Applicants should submit their curriculum vitae, a brief statement of research interests and arrange to have three letters of reference forwarded to: **Dr. Laura Gillespie, Terry Fox Cancer Research Scientist Search Committee, Division of Basic Medical Sciences, Faculty of Medicine, Memorial University, St. John's, Newfoundland, CANADA A1B 3V6** by August 1, 1992.

Memorial University of Newfoundland is an equal opportunity employer. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

QUALITY ASSURANCE COORDINATOR

The Metropolitan Water Reclamation District of Greater Chicago announces a career service examination for this newly established position. Located in the Research and Development Department, this position will coordinate the quality control and quality assurance activities of the District's laboratories. Reporting directly to the Director of Research and Development, the incumbent will work closely with the managers of the various laboratories. These laboratories conduct over 900,000 analyses annually in support of the District's activities and have played a key role in the District's development and testing of new techniques in wastewater treatment. Salary Range: \$45,688 to \$66,821 per year with appointment usually made at the first step, career civil service, and excellent benefit package. Minimum Requirements: Master's degree in analytical chemistry, environmental engineering, or a closely related field. Five years of experience in the laboratory analysis of water, wastewater, or sludge. Two years of this experience must have included, as a principal duty, the coordination of quality assurance and quality control (QA/QC) activities involving the application of statistical methods to the validation of analytical laboratory data. Substitution: Additional full time graduate study beyond the master's degree in one of the specified fields may be substituted for the non-specialized experience on a year-for-year basis, to a maximum of two years. To Apply: Official applications may be obtained from the Personnel Public Service Office, MWRDGC, 100 East Erie St., Chicago, IL 60611, or by calling 312-751-5100. The filing period for this position will be June 10-August 10, 1992. The civil service examination is tentatively scheduled for early September.

**METROPOLITAN WATER
RECLAMATION DISTRICT OF
GREATER CHICAGO**
100 E. Erie St. Chicago, IL 60611
AN EQUAL OPPORTUNITY
EMPLOYER M/F/D

THE UNIVERSITY OF CHICAGO ASSOCIATE VICE PRESIDENT

The University of Chicago seeks a seasoned science administrator familiar with basic science and energy research to serve as liaison between the University and the Argonne National Laboratory, a multipurpose research laboratory it operates under contract with the U.S. Department of Energy.

The Associate Vice President must have the capacity to work collaboratively and collegially with University administration and faculty, the Argonne Board of Governors, the senior management of the Laboratory, the Department of Energy and other government, laboratory and industrial organizations. As an advocate for the University's interest, the Associate Vice President will be the liaison among these groups and keep the Board and other University officials apprised of any significant issues that might affect the Laboratory's operation or impact the University. The Associate Vice President must provide technical and policy expertise to the Board's deliberations. The Associate Vice President also has the opportunity to be an advisor and consultant to the Laboratory's senior management.

The ideal candidate for this position must have excellent interpersonal and organizational skills. Significant university experience, particularly in senior administrative roles is preferred. The person must be familiar with national science policy issues and have the ability to interact with leaders in research, universities, industry and government. An intimate understanding of the physical sciences, particularly related to energy is essential. A Ph.D. in a related field is preferred. Experience with federal contract and oversight procedures, especially with the DOE is preferred. Women and minority candidates are especially encouraged to apply.

All inquiries, referrals and resumes should be submitted to: David Welch, Vice President, Isaacson, Miller, Inc., 334 Boylston St., Suite 500, Boston, MA 02116; phone (617) 262-6500.

Finding Answers Is Our Business.

At Miles Inc., Diagnostics Division we make it our business to find answers. As a worldwide leading manufacturer of automated clinical laboratory instrumentation, we create products and systems that derive strength from past successes, and build a foundation for tomorrow's diagnostic breakthroughs. Our pioneering efforts have resulted in the innovative manufacturing of analytical instrumentation and reagents. If you're looking for a challenging position with an industry leader, we have the perfect answer: Miles Inc., Diagnostics Division.

A number of openings currently exist, ranging from Technologists to Scientists, in the area of Immunodiagnostics.

Our focus is the development of new immunochemical reagents and corresponding automated immunoassays. The candidates we seek must have a strong educational background in analytical and protein biochemistry, immunochemistry and bioorganic chemistry.

Areas of interest include assays for hormones, tumor markers, infectious diseases, anemia, and drugs. Task phases comprise feasibility R&D, preparation/modification of immunological reagents, their formulation, performance optimization and commercialization. Industrial experience is required.

There's no question Miles Inc., Diagnostics Division is a stimulating environment for forward-thinking professionals. There's also no question that ours is an environment of growth and opportunity, rewarded with a competitive compensation and benefits package. For the answer to your career growth needs, please send your c.v. and/or resume in confidence to:
Manager, Human Resources - R&D, Miles Inc., Diagnostics Division, 511 Benedict Avenue, Tarrytown, NY 10591. An Equal Opportunity Employer M/F/D/V.

MILES 

Diagnostics Division

DEAN OF THE SCHOOL OF PHARMACY UNIVERSITY OF WISCONSIN-MADISON

The University of Wisconsin-Madison continues its search for Dean of the School of Pharmacy and invites applications and nominations for the position. The Dean is the chief academic and administrative officer of the School and is responsible for academic planning, personnel, budget, and physical facilities. The Dean reports to the Chancellor.

The School of Pharmacy offers B.S. degrees in Pharmacy, Pharmaceutical Sciences, and Pharmacology-Toxicology, and the Doctor of Pharmacy degree. Through the Graduate School, students may earn the M.S. degree in Hospital Pharmacy and the Ph.D. degree in the fields of Pharmaceutics, Medicinal Chemistry, Pharmaceutical Biochemistry, Pharmacology, History of Pharmacy, Social Studies of Pharmacy, Pharmacy Administration, and Continuing Education.

Candidates must have a successful record of scholarly achievement and accomplishments that meet standards for a tenured appointment at the rank of full professor at UW-Madison; a commitment to maintain and expand professional pharmacy education and pharmacy graduate and postgraduate instruction, research, public service and outreach activities; and possess strong leadership and management skills.

The position is available January 1, 1993. All applications and nominations received by September 15, 1992, will be considered. Submit materials to:

**Professor Joseph Robinson, Chair
Search and Screen Committee
University of Wisconsin-Madison
134 Bascom Hall, 500 Lincoln Drive
Madison, WI 53706
Telephone (608) 262-3956**

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

RESEARCH SCIENTIST MOLECULAR BIOLOGY

St. Luke's Medical Center, Milwaukee, Wisconsin has an excellent opportunity for an experienced Scientist interested in providing expert scientific direction to our Immunotherapy Program. The candidate we seek will be a molecular biologist with several years experience beyond the post-doctoral level. Experience in gene transfer techniques including retroviral-mediated transfection into human cells is strongly preferred.

The selected candidate will be given the latitude to develop an independent research program in the area of human "gene therapy" and to function as the scientific director of our Immunotherapy laboratories. St. Luke's Medical Center has committed significant resources to the development of this program including ample research spaces, well equipped laboratories and support personnel. Consideration may be given to candidates interested in relocating an established research team to St. Luke's Medical Center. An attractive salary and benefit package is included for the selected candidate and his/her research team.

St. Luke's Medical Center, a 600 bed not for profit hospital, has a comprehensive Cancer Care Program and is committed to become a leader in Cancer treatment. Our beautiful city offers the cultural, academic and social events typically found in a large city but in an atmosphere of small town friendliness.

For immediate consideration, please forward your curriculum vitae to:

**M. Brady
St. Luke's Medical Center
P.O. Box 2901
2900 West Oklahoma Avenue
Milwaukee, Wisconsin 53215-2901
(414) 649-7951**

An Equal Opportunity Employer
M/F/H/V



Washington's Good Health Starts Here

Applications and nominations are invited for Vice President for Medical Affairs and Executive Dean at The George Washington University Medical Center.

The George Washington University, founded in 1821, is located on an urban 45-acre campus in the historic Foggy Bottom district of the nation's capital, within walking distance of the White House, the U.S. Department of State and the Kennedy Center for the Performing Arts.

The University is a mature educational and research institution comprised of seven schools and offering 85 undergraduate and 70 doctoral programs, including M.D., Ph.D., Ed.D., D.Sc. and the J.D., as well as 170 master's degrees.

A major component of the University is the Medical Center, which includes a 600-student School of Medicine and Health Sciences, recently ranked 10th in the nation by *U.S. News and World Report* among those medical schools emphasizing primary care.

Another element of the Medical Center is the 501-bed hospital, which President Ronald Reagan called "one of the best and most important in the nation" and "a national treasure." President Reagan's life was saved at GW following an assassination attempt in 1981.

With more than \$35 million annually in extramural support, the GW Medical Center conducts additional research activity at The Children's National Medical Center, the medical staff of which comprises GW's pediatric faculty. Investigators at GW have close relationships with NIH and other federal research laboratories and programs.

The Vice President for Medical Affairs reports directly to President Stephen Joel Trachtenberg and is a member of the senior administrative team of the University. He or she is responsible for all programs and operations of the Medical Center. As Chief Executive Officer of the Medical Center, the Vice President for Medical Affairs exercises academic and administrative responsibility over the School of Medicine and Health Sciences, the University Hospital, the 330 full-time basic science and clinical faculty, the 300 active voluntary physician faculty and The George Washington University Health Plan.

Candidates must have an M.D. or Ph.D. degree and extensive experience in the administrative management of a university medical center. The position requires understanding and leadership in medical education, basic science and clinical research, hospital administration, health care delivery, fiscal management and strategic planning. A record of leadership and superior managerial and interpersonal skills are vital. The successful candidate must understand the Medical Center's teaching and research mission and yet be able to handle the realities of budgetary constraints and a changing medical practice environment. A sense of humor will help, as will tenacity and vision. Compensation will be competitive and negotiable depending upon qualifications and experience.

Applications and nominations will be reviewed commencing mid-summer 1992 and will continue until the position is filled. Interested candidates should send a resume with a cover letter and the names, addresses and telephone numbers of three references to:

Ms. Cleo Graves
Office of the President
The George Washington University
Rice Hall, 8th Floor
Washington, DC 20052

**The
George
Washington
University**
WASHINGTON DC
MEDICAL CENTER

The George Washington University is an equal opportunity/affirmative action employer

SCIENCE's 2nd Annual CAREERS IN SCIENCE

18 September 1992

The second annual Careers issue is custom-designed for recruitment. This special cover story is the ideal environment for your message and will include:

Career trends in:

- Multidisciplinary Fields - Biotechnology, Neuroscience, Materials in Science, Pharmaceuticals and more.
- Money, funding and jobs; Career opportunities in industry.

Special recruitment advertising section-

Full-page ads will be accepted for placement within this editorial section located in the main body of the magazine (ROP), and will be included in the Harvey Research Study on reader recall. All other size ads will be placed in the traditional back-of-the-book section.

Bonus Distribution:

The reprint will be distributed at:

Neuroscience, 25 to 30 October 1992, Anaheim, CA

American Society for Cell Biology Meeting,

15 to 19 November 1992, Denver, CO

With a recruitment ad in SCIENCE, you are guaranteed a worldwide circulation of 155,000 qualified, paid subscribers, and a pass-along readership of over 470,000 total readers. SCIENCE, in its 112 years of publication, is the most respected journal in the industry, ensuring that your ad will be well-read.

For more information or to place your ad, please call
Janis Crowley, Recruitment Advertising Manager, at 212-496-7704

Reservation Deadline: Tuesday, 1 September 1992

**THE ZOOLOGICAL SOCIETY OF
PHILADELPHIA**

PRESIDENT

Recognized as America's First Zoo, The Philadelphia Zoo through its Board of Directors seeks a President with exceptional vision and leadership ability to direct this zoological garden, which is home to more than 1,700 endangered and protected animals. A non-profit corporation established in 1874, the Zoo operates a \$16 million annual budget and separately provides significant management services to the New Jersey State Aquarium. Candidates must possess the background and executive ability to manage a multi-disciplinary, multi-constituency organization with an entrepreneurial spirit and demonstrate a clear understanding of the conservation, education, research and recreation objectives of this leading Philadelphia attraction. Please submit complete resume and references in confidence to:

James M. Kittleman
Kittleman & Associates
300 South Wacker Drive, Suite 1710
Chicago, Illinois 60606
312-986-1166

*The Zoological Society of Philadelphia
is an Equal Opportunity Employer*

A new kind of conference for cutting-edge researchers...

Science *Innovation* '92

New Techniques and Instruments in Biomedical Research

21-25 July 1992 ♦ San Francisco

Sponsored by the American Association for the
Advancement of Science and *Science Magazine*

There's never been a meeting like it.

- ♦ **Acquire an overview of new technologies** each morning in plenary sessions by great pioneers of science.
- ♦ **Get practical solutions to your research problems** each afternoon in intimate advanced-technology workshops.
- ♦ **Introduce your own techniques** at evening poster sessions.
- ♦ **Experience new technologies up close** daily at the exhibition and in evening industry workshops.
- ♦ **Preview emerging technologies** at a unique, last-day session spotlighting the next frontiers of science.

For more information about the scientific program, exhibiting, or submitting abstracts for poster sessions, please contact: AAAS Meetings Office, 1333 H Street, NW, Washington, DC 20005 (Phone: 202-326-6461; Fax: 202-289-4021).

DIRECTOR American Type Culture Collection (ATCC)

Applications and nominations are invited for the position of Director of The ATCC. This position will become available April 1, 1993.

Candidates must have—

- Doctorate in microbiology or a related field
- Well recognized accomplishment in research
- Executive scientific administrative experience
- Experience in fiscal and personnel management
- History of success in securing research and development funds from both private and public sources

Applications should include detailed curriculum vitae, complete information on past and current research support, plus names and addresses of three referees. Send letters of nomination and applications to:

**Dr. Nicholas W. Gillham, Chairman,
Search Committee American Type
Culture Collection, 12301 Parklawn
Drive, Rockville, Md. 20852. This ap-
plication deadline is 1 August 1992.**

An Equal Opportunity Employer/MF

Assistant Professor-in-Residence Department of Pharmacy University of California at San Francisco

The School of Pharmacy invites applications for an Assistant Professor-in-Residence position from scientists who can participate in further development of the area of membrane transport and signal transduction as it relates to biologic processes with a special interest in age-related changes. Preference will be given to candidates who have a strong background in biophysics and experience with cellular patch clamp techniques. Applicants will be expected to attract a substantial portion of their salary required for this non-tenure track position through extramural grant support. Teaching responsibilities may include portions of the pharmacology/pharmacokinetics/membrane transport sequence for professional students and elective and graduate courses in specialty areas.

Ph.D., M. D. or other doctoral degree required. Please send curriculum vitae, a summary of current research, a concise outline of future research plans and list of three intramural and three extramural references by July 15, 1992 to:

Wolfgang Sadée, Ph.D.
Chairperson, Search Committee
School of Pharmacy, Box 0446
University of California at San Francisco
San Francisco, CA 94143-0446

*An Equal Opportunity/Affirmative Action
Employer, Women and Minority Candidates
are Encouraged to Apply*

POSTDOCTORAL FELLOWSHIP

A 2-year postdoctoral position in electrophysiology is currently available in the Pharmacology Department at ICI Pharmaceuticals Group, for independent and collaborative research on the action of drugs and neuromodulators on neuronal calcium channels. Candidate will be involved in ongoing research using the patch-clamp technique in combination with molecular biology to examine calcium channel regulation in acutely isolated and cultured neurons.

Experience in brain slice techniques and knowledge of whole-cell patch-clamp helpful. Familiarity with computer-based data acquisition and analytical techniques desirable.

Interested candidates should submit a curriculum vitae and names/letters of reference to: **Dr. J. M. H. French-Mullen, Dept. of Pharmacology, ICI Pharmaceuticals Group, Concord Pike and New Murphy Road, Wilmington, DE 19897.**



Pharmaceuticals

Equal Opportunity Employer M/F.

THE

BIOGEN

MISSION

Career Growth

Biogen is a thirteen year old leading biotechnology company engaged principally in developing genetically engineered human pharmaceuticals. As a result of its early research, Biogen now derives revenues from five products being sold by its licensees or affiliates in various countries. Biogen currently directs its research and development into areas where the company has particular strength - inflammation, cardiovascular disease, AIDS and selected cancers.

Scientist Molecular Immunology

As the leader in the research and development of anti-inflammatory drug candidates based on LFA-3/CD2 and VLA-4/VCAM-1 interactions, Biogen continues to build on its drug discovery programs. We are seeking a Scientist experienced in the study of cellular interactions, with an emphasis on biochemical pathways utilized immediately following antigen recognition or cell adhesion events, to join a highly motivated and experienced team committed to inflammation research. Applicants should possess either a PhD or MD degree and have postdoctoral experience in the biochemistry or molecular biology of immune cell activation. Publication and active participation in both internal and external collaborations are encouraged.

Our compensation and benefits package is one of the best in the industry, and is designed to attract and retain the finest talent available.

**For immediate consideration, call Joe Tringali at (617) 252-9802, or mail/fax your resume to his attention at Biogen, Inc., Ref. SM0692, 14 Cambridge Center, Cambridge, MA 02142.
Fax: (617) 252-9617. Biogen is an Equal Opportunity Employer.**

BIOGEN

The
NATIONAL RESEARCH COUNCIL
is accepting applications for
**Postdoctoral & Senior Research
Associateship Awards**

tenable at the
**FEDERAL HIGHWAY ADMINISTRATION
Turner-Fairbank Highway Research Center
McLean, VA (Washington, D.C. area)**

Opportunities for research in asphalt chemistry and electrochemistry/corrosion include:

- ◆ studying structure and structure-rheological relationships in chemically modified asphalts using HP-GPC and FTIR;
- ◆ application of electrochemical techniques to determine the effectiveness of the addition of inhibitors to salt in reducing the rebar corrosion in concrete. (Methodology developed should also be applicable in the determination of corrosion rates of alternate deicers); and
- ◆ application of electrochemistry and other investigative techniques to determine corrosion-limiting factors in the corrosion of rebar in concrete in varying environments and to evaluate the effectiveness of coatings and other corrosion control techniques.

Awards are initially for one year, renewable in yearly increments to a maximum of three. The annual base stipend for recent Ph.D. recipients is \$35,000 (appropriately higher for senior researchers), and includes support for relocation, health insurance, and travel to professional meetings.

Deadlines for application are: August 15, 1992 and January 15, April 15 and August 15, 1993.

For further information and application materials, contact:

Dr. W. Clay Ormsby
U.S. Department of Transportation
Federal Highway Administration
6300 Georgetown Pike
McLean, Va 22101
Fax: (703) 285-2379

Qualified applicants will be reviewed without regard to race, creed, color, age, sex, or national origin.

BIOLOGIST

RHÔNE-POULENC RORER RESEARCH & DEVELOPMENT,
*a global leader in pharmaceutical research, currently has
an opportunity available in their new Collegeville World
Headquarters for a Biologist.*

Candidate will be responsible for studying inflammatory and immune diseases to establish animal models of chronic inflammation and autoimmunity. Duties will include analyzing the pathogenesis of these models and assessing experimental therapeutic agents.

To qualify, you should have experience working with rodents with autoimmune diseases (MRL or NZB), mice, other lpr animals or a background with chronic diseases, e.g. collagen arthritis. A Ph.D. in Pharmacology, Immunology, or other appropriate discipline and 2-5 years postdoctoral experience required.

RHÔNE-POULENC RORER offers a highly competitive salary, excellent benefits, a challenging professional work environment and opportunities for continued growth. For confidential consideration, please forward your resume and salary history, to: **RHÔNE-POULENC RORER RESEARCH & DEVELOPMENT, Human Resources Dept. LS (Position #92R-140/RB), P.O. Box 852, Collegeville, PA 19426-0852. Equal Opportunity Employer, M/F/D/V.**

 **RHÔNE-POULENC RORER**

A new kind of conference for cutting-edge researchers...

Science *Innovation* '92

New Techniques and Instruments in Biomedical Research

21-25 July 1992 ◆ San Francisco

Sponsored by the American Association for the
Advancement of Science and *Science Magazine*

There's never been a meeting like it.

- ◆ **Acquire an overview of new technologies** each morning in plenary sessions by great pioneers of science.
- ◆ **Get practical solutions to your research problems** each afternoon in intimate advanced-technology workshops.
- ◆ **Introduce your own techniques** at evening poster sessions.
- ◆ **Experience new technologies up close** daily at the exhibition and in evening industry workshops.
- ◆ **Preview emerging technologies** at a unique, last-day session spotlighting the next frontiers of science.

For more information about the scientific program, exhibiting, or submitting abstracts for poster sessions, please contact: AAAS Meetings Office, 1333 H Street, NW, Washington, DC 20005 (Phone: 202-326-6461; Fax: 202-289-4021).

CYSTIC FIBROSIS

Opportunities In Cystic Fibrosis Research With Genzyme

Since the discovery of the gene responsible for the defect in cystic fibrosis was identified, Genzyme scientists have intensively studied the gene and the protein it encodes. (*Nature* 347, 382-386, 1990, *Nature* 347, 358-363, 1990, *Cell* 63, 827-834, 1990, *Science* 251, 679-682, 1991, *Cell* 66, 1027-1036, *Bio/Technology* 10, 74-77, 1992) Genzyme has made significant technical progress that should facilitate development of both a protein replacement product and a gene therapy product for the treatment of cystic fibrosis patients.

Through the development of its Ceradase® enzyme to treat Gaucher disease, Genzyme has gained extensive experience in the application of protein replacement therapy in the treatment of protein deficiency diseases. In addition, Genzyme scientists and their collaborators have demonstrated that the defective ion transport mechanism present in airway cells taken from cystic fibrosis patients can be corrected in vitro by the insertion of normal CFTR genes into the cells.

Now, due to a major increase in resources committed to cystic fibrosis research and development, Genzyme has opportunities for individuals with a proven track record of accomplishment and contributions in areas directly or indirectly related to cystic fibrosis research.

Research Scientists

■ Protein Formulation and Delivery

- Devise new ways to purify analytical and reagent amounts of membrane proteins such as CFTR and fusogenic proteins. Candidates must have a Ph.D. with 4-10 years of post-doctoral experience including demonstrated expertise in the purification and analysis of membrane proteins. (Code SG1)

- Explore delivery of CFTR using liposomes, with or without targeting. Candidates must have a Ph.D. and 3+ years of post-doctoral experience including experimental experience in designing, constructing, and analyzing liposomes and liposome-cell interactions, especially as they relate to membrane fusion. (Code SG2)

■ Molecular Biology

- Apply your expertise in the development of a program for receptor mediated entry of DNA into epithelial cells. A Ph.D. and experience in cellular and molecular biology are required. (Code SG3)

- Clone and characterize human membrane fusion proteins. A Ph.D. and experience in cellular and molecular biology are required. (Code SG4)

■ Cellular Biology

- Scientist or veterinarian to work with whole animals including primates to assess CF protein and gene therapy in whole lung. Requires Ph.D. with extensive animal physiology experience specializing in lung function or delivery of drugs to the lungs. (Code SG5)

■ These represent current opportunities. However, individuals with expertise in related areas are also encouraged to apply.

In addition to the opportunity to make a significant contribution in cystic fibrosis research, Genzyme offers an excellent compensation and benefits package, including 3 weeks' vacation, a 401(k) plan with a company match, extensive insurance benefits, and an Employee Stock Purchase Plan.

Please forward your resume, indicating job code, to: Human Resources, Dept. S619, Genzyme Corporation, One Kendall Square, Cambridge, MA 02139.

An equal opportunity employer.

genzyme

Advancing Health Care Products And Services Worldwide

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Positions available for study of any of the following topics pertaining to retroviral-induced diseases: (1) Studies of a molecularly cloned cell surface receptor that mediates infection by mouse retroviruses. The receptor normally functions as a permease for basic amino acids. Our goal is to learn how retroviruses invade cells. (2) Analysis of a transcription factor (PU.1) that immortalizes erythroblasts by abrogating their commitment to differentiate. The PU.1 gene is activated during progression of Friend virus-induced erythroleukemia. (3) Investigation of the mechanism by which the Friend virus-encoded membrane glycoprotein binds to erythropoietin receptors to activate mitogenesis of infected erythroblasts. Productive, excellent environment. Send curriculum vitae and names of three referees to: **David Kabat, Department of Biochemistry and Molecular Biology, School of Medicine, Oregon Health Sciences University, Portland, OR 97201-3098. FAX: 503-494-8393. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study the mechanisms of action of transforming growth factor-Beta (TGF- β). Research of the laboratory focuses on antiproliferative and differentiation aspects utilizing human promonocytic leukemia cells. Background in molecular biology desirable. Please send curriculum vitae and names of three references to: **Ronald Ignatz, Ph.D., Department of Cell Biology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.**

POSTDOCTORAL FELLOWSHIP IN MOLECULAR PARASITOLOGY

A position is available immediately to study molecular biology of the protozoan parasite *Toxoplasma gondii*. Project involves cloning, expression, and characterization of genes and products important for host immunity or useful for diagnosis of infection. Applicant should have a Ph.D. in molecular biology or related field, with experience in gene cloning and expression. Send curriculum vitae and three references to: **Dr. Stephen Parmlay, Research Institute, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, CA 94301.**

POSTDOCTORAL FELLOW to work on project on the effects of space flight on macrophages and neutrophils in culture. Immunological function assay and signal transduction assay experience desirable. Available immediately. Send curriculum vitae and list of three references to: **Dr. Gerald Sonnenfeld, Department of Microbiology and Immunology, School of Medicine, University of Louisville, Louisville, KY 40292; telephone: 502-588-6323; FAX: 502-588-7043. The University of Louisville is an Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP IN EXOCYTOSIS is available to investigate the biochemical mechanisms underlying exocytosis using bovine adrenal chromaffin cells and frog oocytes injected with chromaffin granules. The postdoctoral fellow should have molecular biology expertise to use a recently developed transient transfection system to study the role of specific proteins in exocytosis in primary chromaffin cells. Contact: **Dr. Ronald W. Holz, Department of Pharmacology, University of Michigan Medical School, Ann Arbor, MI 48109-0626, telephone: 313-764-2267, FAX: 313-763-2267. The University of Michigan is an Equal Opportunity Employer.**

POSTDOCTORAL FELLOW, NIH STIPEND depending on years since doctoral degree. Should have training in Northern, Southern blots and in situ hybridization. PCR desirable. To be applied to interdisciplinary project concerning endothelial pathophysiology of cerebral microcirculation and endothelial-smooth muscle interaction. Both intact vessels and cultured cells will be used. Work may expand to include receptor analysis. Work can begin between 1 July 1992 and 1 July 1993. Funding will last at least 2 years. Forward curriculum vitae and three references to: **William Rosenblum, M.D., Medical College of Virginia-Virginia Commonwealth University, Box 17, MCV Station, Richmond, VA 23298-0017. FAX: 804-225-3299. Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP UNIVERSITY OF WASHINGTON

Available immediately to study targeted delivery, disposition, and metabolism of antivirals and vaccines. Current work encompasses biochemical, immunological, and pharmacological approaches in a unique and collaborative setting. Send curriculum vitae and three letters of reference to: **Dr. Rodney J. Y. Ho, Department of Pharmaceutics, University of Washington, BG-20, Seattle, WA 98195.**

POSTDOCTORAL FELLOWSHIPS: Two positions funded by the MacArthur Foundation Network on the Biology of Parasite Vectors and one by the WHO TDR Program are currently available for collaborative research projects involving the Malaria Branch of CDC and the Biology Department of Emory University. All positions will involve work with the malaria vector mosquito *Anopheles gambiae*. Important prerequisites include prior work with insects, preferably mosquitoes, and expertise in molecular biology, cytogenetics, and/or in situ hybridization. Salaries from \$25,000 to \$30,000 per year. Send by 31 July 1992 curriculum vitae and names of three references to: **Dr. Frank H. Collins, Malaria Branch, F-12, CDC, Atlanta, GA 30333; FAX: 404-488-4427. Emory University and the Centers for Disease Control are Affirmative Action/Equal Opportunity Employers.**

POSTDOCTORAL FELLOWSHIPS

Six faculty members of **THE JOHNS HOPKINS UNIVERSITY** invite applications for postdoctoral fellowships in a program on "Lipid and protein traffic and dynamics in polarized epithelial cells." The faculty and their areas of interest are:

- Michael Edidin:** Lateral organization of cell surfaces.
- Douglas Fambrough:** Targeting of membrane proteins.
- Ann Hubbard:** Membrane dynamics.
- Carolyn Machamer:** Golgi complex structure and composition.
- Richard Pagano:** Distribution and transport of lipids.
- Trina Schroer:** Microtubule-based vesicle transport.

The program is highly interactive—groups meet together regularly and a number of collaborative projects are under way. Interested applicants, preferably recent Ph.D. candidates, should send curriculum vitae, names of three references, and a statement of research interests to: **Dr. Michael Edidin, Department of Biology, The Johns Hopkins University, Charles and 34th Streets, Baltimore, MD. FAX: 410-516-5213; BITNET: EDIDIN@JHUVMs.**

TWO POSTDOCTORAL FELLOWSHIPS

One is to study the mechanisms underlying the potent immuno-adjunct properties of a recently cloned lymphokine, migration inhibitory factor (MIF); the other is to detect and clone the macrophage MIF receptor. Appropriate prior experience in immunology and/or molecular biology required. Contact: **Dr. John R. David, Department of Tropical Public Health, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Available late July 1992 to study peptide-membrane interactions of opioid peptides via permeability, calorimetry, and spectroscopy. Position is part of a Program Project, Dr. V. J. Hruby, director. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. David F. O'Brien, Department of Chemistry, University of Arizona, Tucson, AZ 85721. FAX: 602-621-8407. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH SCIENTIST. To study ceramic superconductors. Requires Ph.D. with experience in superconductivity research techniques, x-ray diffraction, growth of single crystals, synthesis and fabrication of flexible superconducting wires. Competitive salary and benefits. Send application including curriculum vitae and references by 15 July 1992 to: **Dr. Jui H. Wang, Acheson Hall, SUNY/Buffalo, NY 14214. SUNY is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE for treatment, teaching and research hospital in northwestern Ohio. Carry out research projects involving: (1) Molecular study on ion transport protein in mitochondria; (2) functional assay of an anticancer fluorescent compound; (3) the mechanism of local anesthetics-induced proton transport in mitochondrial inner membrane. Ph.D. in pharmacology required, and doctoral dissertation must have been a study of ion transport in mitochondria and the effect of related drugs on said ion transport. No experience necessary. Forty hours per week, 8:30 a.m. to 5:00 p.m. Monday to Friday. Salary: \$27,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **I. Ellison, JO# 1333699, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

RESEARCH ASSOCIATE or SENIOR POSTDOCTORAL FELLOW with Ph.D. in biochemistry, microbiology or pharmacology, experience in molecular biological techniques, interest in the molecular actions of chemotherapeutic agents and mechanisms of drug resistance required for project to identify genes responsible for resistance to platinum antigens or agents. Please refer all applications to: **Henry Simpkins, M.D., Ph.D., Professor and Chairman, Department of Pathology and Laboratory Medicine, Temple University Health Science Center, 3401 North Broad Street, Room 312-OPD, Philadelphia, PA 19140. Equal Opportunity Employer, M/F.**

POSTDOCTORAL RESEARCH ASSOCIATES

Two positions available immediately for Ph.D. with background in molecular biology/biochemistry/immunology for investigating roles of hematopoietic protein tyrosine phosphatases in signal transduction. Experiences in molecular cloning and/or protein biochemistry highly desirable. Send curriculum vitae, a brief statement of research experience and interests, and names, addresses and telephone numbers of three references to: **Dr. Akiko Takeda, Department of Pathology, Roger Williams Medical Center—Brown University, 825 Chalkstone Avenue, Providence, RI 02908.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately for Ph.D. or M.D. with training and experience in molecular biology. Position with future independent faculty potential. Laboratory devoted to study of endogenous growth factor/receptor expression in corneal epithelial, stromal fibroblast, and endothelial cells and regulation of cell growth and senescence. Experience with PCR, blotting, nucleic acid sequencing, and recombinant DNA techniques required. Send curriculum vitae, cover letter of interests, and three references to: **Steven E. Wilson, M.D., Department of Ophthalmology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235.**

RESEARCH ASSOCIATE IN VIROLOGY/CLINICAL MOLECULAR BIOLOGY is sought by Maryland Medical Laboratory, Inc. This person would utilize findings and techniques from basic research and institute them into a progressive reference laboratory. Applicants should have a Ph.D. or equivalent qualifications with direct experience with a wide variety of nucleic acid detection techniques. Inquiries should be made by 3 July 1992 to: **William A. Meyer III, Ph.D., at 1-800-368-2576, ext. 2239, or to: Maryland Medical Laboratory, Inc., 1901 Sulphur Spring Road, Baltimore, MD 21227.**

RESEARCH ASSOCIATE to study enzymes of *Toxoplasma*. Must have Ph.D. and strong background in enzyme purification, kinetics, and regulation by phosphorylation. Must have good knowledge and experience in DNA cloning, expression, cell culture, and immunological techniques. Must, with minimal supervision, be able to design and carry out experiments to study structure/activity relationship of enzyme inhibitors and test them on infected cells. Expected to assist in guidance of trainees and help prepare publications. Research experience should be supported by suitable publications in peer-reviewed journals. Salary: \$29,000 per year. Send curriculum vitae and three letters of reference to: **Dr. Tag Mansour, Department of Pharmacology, Stanford Medical School, Stanford, CA 94305. An Affirmative Action/Equal Opportunity Employer.**

I | E

Innovation & Efficiency

Using innovation to improve the efficiency of molecular biology research products has been the cornerstone of Stratagene's development since our founding in 1984. Stratacyte, a subsidiary, is looking for several exceptional Postdoctoral candidates.

POSTDOCTORAL SCIENTISTS

Molecular Biology • Immunology
Protein Engineering

Research will be performed in the use of cutting-edge molecular biology techniques in immunology leading to human therapeutic applications. [See *Proc. Natl. Acad. Sci. (USA)* 87, 8055-8099 (1990) and *J. Immunol.* 148, 2918-2922 (1992).] Research experience required in molecular biology, especially bacteriophage vectors, PCR strategies, and cDNA library cloning. Preference will be given to innovative individuals who also have some expertise in protein design and/or immunology.

Publication in referred journals and attendance at national scientific meetings will be strongly encouraged.

These positions offer a very competitive postdoctoral salary (\$25,000 min.) and may lead to a Staff Scientist position. Stratagene offers an attractive and stimulating work environment in beautiful San Diego. All qualified candidates please forward c.v. to: Stratagene, Attn: Professional Staffing, 11099 N. Torrey Pines Road, La Jolla, CA 92037. Equal Opportunity/Affirmative Action Employer.



Genetics Computer Group

Database Developer

GCG, producer of the widely acclaimed *Wisconsin Sequence Analysis Package*, is looking for someone to develop database software for DNA and protein sequence data. Applicants should have a strong background in computing as well as some experience with biological applications. Responsibilities will include developing and modifying database applications, maintaining the data interface to the GCG Package, preparing database updates, and providing technical support.

Application Developer

GCG is also looking for someone to develop software for DNA and protein sequence analysis. Applicants should have a strong background in computing and biology and have an interest in algorithms. Responsibilities include developing and modifying programs, and doing some technical support.

Technical Editor

This person will help write and edit our documentation. Applicants with a background in biology and computing will be preferred.

All candidates must have good communication, writing and social skills. Madison, Wisconsin, is highly regarded for its educational system and quality of life, and GCG offers an attractive compensation and benefits package.

Please send resumes to: Dr. Irv. Edelman, Genetics Computer Group, Inc., 575 Science Drive, Suite B, Madison, Wisconsin 53711. An Equal Opportunity Employer.



Genetics Computer Group

DIRECTOR

General Clinical Research Centers Program
National Center for Research Resources
National Institutes of Health

The National Center for Research Resources (NCRR) is seeking applicants for the position of Director, General Clinical Research Centers (GCRC) Program. This position is located in Bethesda, Maryland, and is a permanent full-time position with a salary range of \$90,000 to \$112,100 per annum commensurate with qualifications. Physicians may be eligible for Physician Comparability Allowance ranging from \$5,000 to \$20,000 per year.

The Director, GCRC Program, is responsible for planning, developing, managing and evaluating a multimillion dollar program of grants and contracts which supports high quality clinical research throughout the Nation. The GCRC Program currently supports 74 General Clinical Research Centers with a 600 research bed capacity and an annual budget of approximately \$118 million. Applicants for this Senior Executive Service position must have a Doctor of Medicine degree or equivalent. Send applications to:

Ms. Pathenia Wiggins
NCRR
Building 31, Room 3B50
9000 Rockville Pike
Bethesda, MD 20892



For application forms and a copy of the requirements, contact Ms. Wiggins at NCRR on (301) 496-1524. **Deadline for applications is July 22, 1992.**

Public Health Service Commissioned Officers interested in performing the duties of the position within the Commissioned Corps may submit a resume to the above address.

NIH is an Equal Opportunity Employer

ENZON, Inc.

The excitement is contagious when a company with outstanding products and a vision of the future begins to come into its own. ENZON is such a company. Our core technology enhances the delivery of protein-based drugs; it offers the promise of new life to patients and a unique opportunity for the innovative and imaginative professionals who participate in the development.

Scientist

Supervisor, Analytical Chemistry

Develop and implement bioanalytical procedures to support research, clinical and related projects; coordinate analytical chemistry group activities; write reports and provide recommendations and monographs based on generated data. Ideally, you must have a PhD in Analytical Chemistry, Biochemistry, Biology, Immunochemistry or the equivalent, and familiarity with enzymes and immunoassays. Experience analyzing biological/clinical samples is desirable, and a knowledge of pharmacokinetics, drug metabolism, cGMP or computers is a plus. **Dept. S/SAC.**

We offer a fast-paced environment where creativity is valued, and independent thinking, as well as collaboration, is encouraged. We offer unparalleled support for your scientific standing, and a generous compensation and benefits package. Please send your resume, referencing the department, to: **Corporate Human Resources, Enzon, Inc., 40 Cragwood Road, South Plainfield, NJ 07080.** An Equal Opportunity Employer.

ADDING TIME TO LIFE®

POSITIONS OPEN

RESEARCH ASSOCIATE

Research associate needed with surgical and obstetrical expertise to contribute to projects dealing with central nervous system function and the effects of stroke and brain trauma, including during pregnancy. Duties include: performing and training residents and fellows to use microsurgical techniques on animal models, administration and testing effect of drugs on surgical outcome, conducting behavioral and neurological testing, performing brain perfusions and necropsies, using computers for data entry, assisting neurosurgeons with intraoperative electrophysiological monitoring by operating evoked potential equipment, coordinating and supervising scheduling of animal surgeries and maintaining equipment and supplies. A Ph.D., M.D., or equivalent terminal degree in medical science or a related discipline is required. Hours are 8 a.m. to 5 p.m., Monday to Friday; salary: \$22,568 per year. Contact: **The Mississippi State Employment Service, P.O. Box 12410, 5959 I-55 North Frontage Road, Jackson, MS 39236-2410, job order number MS 2612720. Equal Opportunity Employer, M/F/H/V.**

FREE-LANCE WRITER/EDITOR wanted for scientific proceedings on medical therapies and diagnostic procedures. If you are an experienced medical editor, and hold a Ph.D. or M.D. (or have similar academic training), we would like to hear from you. Please send résumé, cover letter, and writing/editing samples to: **Ligeia Fontaine, Associate Director for Publications, Health Insurance Association of America, 1025 Connecticut Avenue, NW, Washington, DC 20036-3998. No calls.**



MAMMALIAN GENETICISTS. Unique opportunity to participate in the expansion of McLaughlin Research Institute, a small mammalian genetics center in Great Falls, Montana. Several openings for established investigators to work in a nonbureaucratic, interactive research environment and to participate in the institute's future development. A new research building, including a large mouse facility, is under construction and will be completed in the summer of 1993. Current research programs are on the genetics of susceptibility to cancer and neurodegenerative diseases, but recruits will play a major role in determining future research directions. Developmental biologists, molecular geneticists, neurogeneticists and immunologists whose research emphasizes mouse models are particularly encouraged to apply. Applications, including names of individuals we may contact for references, should be addressed to: **George A. Carlson, Ph.D., Director, McLaughlin Research Institute, 1625 Third Avenue North, Great Falls, MT 59401.** For additional information contact George Carlson or any of the following members of our Scientific Advisory Committee: **Irv Weissman, David Baltimore, Bruce Chesebro, Neal Copeland, Jeff Frelinger, Leroy Hood, or Jack Stimpfling. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH TECHNICIAN II

A Research Technician is needed to participate in and coordinate studies of the underlying vascular changes accompanying vasospasm in humans and in experimental preparations. Duties will include: (1) preparation and analysis of vasospasm on the proliferative status of vascular connective tissues; (2) determining the effects of angioplasty on the various structural elements of the vascular wall using electron microscopy techniques; (3) instructing neurosurgery faculty and resident staff in the latest endovascular neurosurgical techniques; (4) constructing and providing balloons and related materials for use in human neurovascular surgery and experimental use. A Ph.D., M.D., or equivalent terminal degree in medical science or a related discipline is required. Hours are 8 a.m. to 5 p.m., Monday to Friday; salary: \$16,473 per year. Contact: **The Mississippi State Employment Service, P.O. Box 12410, 5959 I-55 North Frontage Road, Jackson, MS 39236-2410, job order number MS 2612683. Equal Opportunity Employer, M/F/H/V.**

POSITIONS OPEN

ANALYTICAL CHEMIST

Mentor Corporation, a leading manufacturer of implant products used by plastic surgeons and urologists, is currently seeking an Analytical Chemist to direct all chemical and polymer analytical work for Corporate R&D and regulatory approvals. Position interfaces with the FDA and other professional groups regarding chemical information. Candidate must have experience in instrumentation, methods development, extraction analysis, and medical devices, as well as knowledge of silicone chemistry and various analytical chemical/biochemical techniques and device regulations. Ph.D. in a chemistry-related field is preferred. Must possess strong communication skills and have supervisory background. Please forward résumés to: **Terry DeMaria, MENTOR CORPORATION, 5425 Hollister, Santa Barbara, CA 93111. Equal Opportunity Employer, M/F/D.**

RESEARCH PHYSICIAN: Assist in physiological experiments in pregnant animals. Requires extensive experience in obstetrics, large animal surgery and anesthesia, biochemical assays, blood gas and related analysis, gas chromatography, computer-based data analysis, and statistics. Duties include surgery, animal care, performance of studies, analysis of samples, laboratory inventory, equipment maintenance and repair. Salary: \$20,500 per year. Please apply to: **Sandra Yanai, Department of OB/GYN, Columbia University, 622 West 168th Street, New York, NY 10032. Equal Opportunity Employer.**

The Molecular Allergy and Immunology Section, National Institute of Allergy and Infectious Diseases (NIAID), invites applications for a tenure-track **RESEARCH SCIENTIST** position starting in 1993. Requirements include a Ph.D. in pharmacology, cell biology or molecular biology, a 5-year minimum of postdoctoral experience and expertise in immunology and molecular biology. Successful candidates are expected to establish an outstanding independent research program investigating the molecular basis of allergic reaction. Candidates with a strong research background in immunology and pharmacology, and with experience in gene regulation and in the biochemistry of cell activation, are preferred. Additionally, applicants should be familiar with techniques of tissue culture, DNA recombination, protein chemistry, HPLC, bioassays of cytokines and must have demonstrated involvement in quality research published in peer-review journals. Starting salary will be commensurate with qualifications and experience. Applicants should send their curriculum vitae, selected reprints, a statement of research accomplishments and names of three referees to: **Dr. John Gallin, c/o Dr. Jean-Pierre Kinet, NIH-NIAID, 12441 Parklawn Drive, Rockville, MD 20852. Women and minorities are encouraged to apply. NIH is an Equal Opportunity Employer. U.S. citizenship required.**

SCIENTIFIC RECRUITER. Scientific recruiting firm is seeking qualified individuals for office located in Paducah, Kentucky. Recruiting experience essential. Science background a plus. Excellent communication and organization skills required. Please call or fax résumé to: **SCIENTIFIC RECRUITERS, INC., 2320 Broadway, Suite 404, Paducah, KY 42201, telephone: 502-443-3031, FAX: 502-443-3161.**

MEETINGS

FIRST INTERNATIONAL E. COLI GENOME MEETING. MADISON, WISCONSIN, 10 to 14 September 1992. The meeting will bring together leading researchers in the analysis of the *E. coli* genome at the genetic, sequence and structural levels with the goal being to facilitate a coordinated structure/function analysis of the genome. The sessions will include: status reports on large-scale sequencing efforts, new tools in sequence analysis, molecular evolution studies, databases, genetic analyses, global regulatory networks, and chromosome structure studies. The attendance at the meeting will be limited to approximately 250. Those wishing application and abstract materials should contact, by 10 July 1992, **Ms. Marie Ellingson, Conference Services, Memorial Union, University of Wisconsin, 800 Langdon Street, Madison, WI 53706-1495.**

COMPUTER MARKETPLACE

STATISTICAL SOFTWARE

Accurate, easy to learn. For MS-DOS. Includes t-tests, ANOVA, chi-square tests, DOE, survival analysis, sample size and power analysis, curve fitting, graphics, more. Spreadsheet-style interface. Transfer graphics to other programs. Thousands of users. Base system: \$125. Complete: \$395. Ask for Dr. Hintze (PhD statistician) at (801) 546-0445. FAX: (801) 546-3907. NCSS, 329 North 1000 East, Kaysville, UT. 84037.

Circle No. 41 on Readers' Service Card

MARKETPLACE

\$3.50/Base Custom DNA Synthesis

No Set-up Fee, Shipped in 24 hours.

KEYSTONE LABORATORIES, Inc

1-800-788-4 DNA

1-800-786-4 DNA Fax

Circle No. 27 on Readers' Service Card

Custom Peptides Shipped in 10 Days

\$30 a residue, no setup charge, 10 uM scale.
6 to 16-mers

Research Genetics

1-800-533-4363 FAX 205-536-9016

Circle No. 6 on Readers' Service Card

Quality DNA Services from \$3/base+set-up Call Midland 1-800-247-8766

Circle No. 8 on Readers' Service Card

Custom DNA Purified and Delivered in 48 hours.

\$7.50 per base • Purified
Guaranteed minimum 100 µg DNA

Research Genetics

1-800-533-4363

Circle No. 7 on Readers' Service Card

FREE PRODUCT INFORMATION SERVICE

Send a letter stating the specifics about your new laboratory and *Science* will put you in touch with the vendors whose products you will need.

Write to:

**Science New Lab Service Department
1333 H Street, NW
Washington, DC 20005**



SMART PEOPLE HAVE
BEEN KNOWN TO
MISPLACE THEIR
COMBS, BUT NEVER
THEIR PIERCE CATALOG.

Relatively speaking, there's no better resource for immunological information and products than The Pierce ImmunoTechnology Catalog & Handbook. But you don't have to be a genius to figure that out. In labs all over the world, you'll find well-hidden, well-worn and rumpiled copies of the Pierce Catalog. It features a nearly



infinite number of products, including kits, each designed to make your research more efficient and effective. We can't promise you'll win a Nobel Prize if you use The Pierce Catalog, but we can absolutely guarantee your satisfaction. So pick up your copy today. And don't ever, ever put it down.



250 NEW PRODUCTS FOR IMMUNOASSAYS, ANTIBODY PRODUCTION & PURIFICATION!
FOR PRODUCTS, A CATALOG OR TECHNICAL ASSISTANCE CALL: 1.815.968.0747. IN EUROPE: 31-1860-19277.

Circle No. 5 on Readers' Service Card

Simple Sequence Repeat Polymorphism Markers

Simple sequence repeats (SSR) occur throughout the mammalian genome and throughout the genomes of most higher eukaryotes. Because these repetitive elements are found distributed throughout the genome and because these elements frequently are polymorphic between strains or individuals, they have shown great utility as genomic markers^{1,2}. Additionally, areas of interest can be studied further through positional cloning³.

Length polymorphisms have been discovered in genomes which contain simple sequence repeats. SSR markers have been utilized in rat to localize multiple loci linked to hypertension⁴. As the Human Genome Project continues to construct genomic maps in humans, mice and other candidate organisms, the number of genomic SSR markers will expand and the utility of these markers as a method for mapping traits determined by multiple loci will increase.

The need to synthesize the large number of PCR primers required is a major obstacle to the widespread use of this powerful technique. Research Genetics has a longstanding commitment to a number of groups developing these markers and is committed to making these markers available to researchers promptly and in a convenient and economical form. New markers are constantly being

added and we encourage your assistance with increasing the size and quality of our repository. We are working toward becoming a central distributor for SSR markers and a repository of the most current information for genomic maps utilizing SSRs. Research Genetics invites all researchers both in plant and animal research to contact us for additional information on how we can help you with primer production and/or distribution of your markers.

SSR markers are PCR[†] primers which flank a simple sequence repeat, and are sold under the tradename of MapPairs[™] by Research Genetics. Typically, the forward primer is kinased and the PCR products are electrophoresed on a polyacrylamide gel and autoradiographed. Alleles are scored and the information is analyzed statistically to determine linkage. Examples of the multiple uses for MapPairs[™] include establishing genetic linkage for phenotypic traits determined by multiple loci, characterization of new or existing strains, characterization of cell lines and many others.

The price of a single MapPairs[™] is \$20.00 (discounts for large quantities) and includes both primers, in solution and ready to use, with enough of each primer for 1000 PCR reactions using the popular 10 µl protocol^{4,5}. All markers can be ordered separately or in sets. Presently the largest single SSR genomic map is for mouse. The map is expected to expand to ~1000 markers soon. Many human markers from a number of groups are available including 100 SSRs which can be

amplified under identical PCR conditions and which have been mapped to specific chromosomes⁶. We anticipate a single rat map with over 400 SSR markers in the near future.

REFERENCES

1. J.L. Weber and P.E. May. *Am. J. Hum. Genet.* **44**, 388 (1989).
2. J.L. Weber. *Genomics* **7**, 524 (1990).
3. D. Botstein, R. White, M. Skolnick and R. Davis. *Am. J. Hum. Genet.* **32**, 314 (1980).
4. H.J. Jacob, K. Lindpainter, S.E. Lincoln, K. Kusumi, R.K. Bunker, Y-P. Mao, D. Ganten, V.J. Dzau, E.S. Lander, *Cell* **67**, 213 (1991).
5. W. Dietrich, H. Katz, S.E. Lincoln, H-S. Shin, J. Friedman, N. Dracopoli, E.S. Lander, *Genetics*, in press.
6. T.J. Hudson, M. Engelstein, M.K. Lee, E. C. Ho, M.J. Rubinfeld, C.P. Adams, D.E. Housman, N.C. Dracopoli, *Genomics*, in press.

MAPPAIRS[™] FOR GENOMIC CHARACTERIZATION

**MARKERS CONSIST OF A PAIR
OF PCR[†] PRIMERS WHICH
FLANK A SIMPLE SEQUENCE
REPEAT WHICH
IS POLYMORPHIC**

**HUMAN AND MOUSE
MARKERS IN STOCK.**

**RAT MARKERS
AVAILABLE SOON.**

**CATALOG No. 20500
\$20.00 / PAIR**

**QUANTITY DISCOUNTS AVAILABLE
Circle No. 32 on Readers' Service Card**

Research Genetics

2130 Memorial Pkwy SW, Huntsville, AL 35801

USA or Canada 1-800-533-4363

UK 0-800-89-1393

FAX 1-205-536-9016

Custom DNA

Purified and Delivered in 48 hours

Research Genetics

1-800-533-4363

MapPairs is a trademark of Research Genetics. These primers are designed and sold for use in the Polymerase Chain Reaction (PCR) process covered by patents owned by Hoffmann-La Roche. Use of the PCR process requires a license. A license for research may be obtained by purchase and use of authorized reagents and DNA thermocyclers from The Perkin-Elmer Corp. or by otherwise negotiating a license with Perkin-Elmer.