

# See you in San Francisco!

*...at the premier event  
for scientific and technical professionals*

AAAS 1994 Annual Meeting

## The AAAS Annual Meeting

San Francisco Hilton and Towers

18-23 February 1994



SCIENCE AND A  
CHANGING WORLD

**Over 125 sessions**



**More than 700 speakers**



**100 exhibiting companies and publishers (see listings inside!)**



**Network with 5000 of your peers**



**Explore new career opportunities at the Employment Exchange**

*Gain insight into the latest scientific advances  
and enhance your professional development at the  
1994 AAAS Annual Meeting*

**American Association for the Advancement of Science**

# Lectures

**Hear some of the top speakers in science—FREE!**

## Plenary Lectures

Plenary lectures will be held each day at the Hilton in the Continental Ballroom (4 and 5) from 6:30 PM until 7:30 PM with the exception of Eloise E. Clark who will speak from 6:00 PM until 7:00 PM.

**Fri, Feb 18:**

**John H. Gibbons,**  
Assistant to the President of  
the U.S. for Science and  
Technology – *Science,  
Technology and the Clinton  
Administration*

In these capacities, Dr. Gibbons is charged with providing access to authoritative information and expert scientific, engineering and technological advice for the President, Federal Officials, and Congress, and with coordinating science and technology policy throughout the Federal Government. Prior to his appointment by President Clinton, Dr. Gibbons directed the congressional Office of Technology Assessment (OTA).



**Sun, Feb 20:**

**Eloise E. Clark,**  
Vice President for Academic  
Affairs and Professor of  
Biological Sciences, Bowling  
Green State University – *TBA*

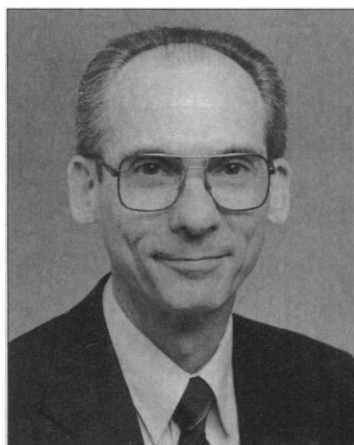
Dr. Clark is the first to hold this newly created position at BGSU that incorporates the academic functions of the previous Provosts' responsibilities. As principal academic officer at the University, she has responsibilities for the Graduate College, Research Services, Continuing Education, and the Libraries and Learning Resources. Prior to this appointment, Dr. Clark was Assistant Director of the National Science Foundation.



**Sat, Feb 19:**

**Edward C. Stone,**  
Director, Jet Propulsion Lab  
Vice President and Professor of  
Physics, California Institute  
of Technology – *The Solar  
System: A New View*

Dr. Stone has served as the project scientist for the Voyager Mission since 1972 and coordinated the efforts of 11 teams of scientists in their studies of Jupiter, Saturn, Uranus and Neptune.



**For detailed program information  
see the November 19, 1993  
issue of SCIENCE or call  
(202) 326-6450 NOW!**

**See you in San Francisco!**

# Exhibition

**Visit these fine companies at the AAAS exhibition –  
Get information, products and services you can use!**

<b>*Exhibitor .....</b>	<b>Booth #</b>		
Academia Book Exhibits .....	202	Elsevier Science Publishing Company .....	307
American Association for Accreditation of Laboratory Animal Care .....	702	Encyclopaedia Britannica North America .....	210
American Mathematical Society / Mathematical Connections .....	207	Harvard University Press .....	318
American Society of Mechanical Engineers .....	208	Heldref Publications .....	204
Aries Systems .....	206	Island Press .....	101
Association of American University Presses, Inc. ....	407	INSPEC/IEEE .....	413
Battelle Memorial Institute .....	408	International Committee Against Racism .....	608
Boeing Defense & Space Group .....	502-508, 601-607	Lawrence Berkeley Laboratory .....	415
Casio, Inc. ....	104	Lightbinders, Inc. ....	604
Committee for the National Institute for the Environment .....	717	Math/Science Nucleus .....	312
Discover Magazine .....	309	NASA / Goddard Space Flight Center .....	418
Discovery Scope, Inc. ....	718	National Geographic Society's Research & Exploration .....	313
Dover Publications, Inc. ....	602	National Library of Medicine .....	417
Eisenhower National Clearinghouse .....	305	National Science Foundation .....	315
		Niles and Associates .....	205
		Office of Naval Research .....	209
		Oxford University Press .....	102
		PHI Enterprises, Inc. ....	317
		Protestant Churches of Science .....	701
		The Scholar's Choice .....	314
		Science by Mail .....	106
		Science Service .....	316
		State Network of Biomedical Research Associations .....	217
		TCI Software Research, Inc. ....	617
		U.S. Department of Energy / Energy Efficiency and Renewable Energy .....	308
		U.S. Department of Energy / Environmental Restoration & Waste Management .....	301
		U.S. Department of Energy/Triodyne .....	212, 214
		U.S. Department of Veterans Affairs .....	412
		U.S. Environmental Protection Agency ...	103
		U.S. Geological Survey .....	201, 203
		Union of Concerned Scientists .....	618
		University Science Books .....	311
		Wolfram .....	606
		Vaxcel, Inc. ....	411

\* This is a partial listing. Final listing of exhibitors will be available at the registration desk.

**Exchange this  
FREE pass for  
your Exhibit  
Only Badge at  
the Meeting  
Registration  
Desk**

**ADMIT ONE FREE**

## **Exhibition Free Pass AAAS 1994 Annual Meeting**

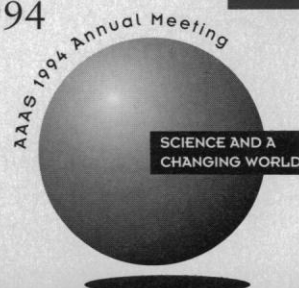
Good February 20-22, 1994

San Francisco Hilton  
and Towers

Grand Ballroom

To redeem this coupon, simply complete  
the Registration Form, on-site,  
and check the "Exhibit Only" box.

**A  
\$25  
Value!**





# Register On Site

**AAAS 1994 Annual Meeting February 18-23, 1994,  
San Francisco Hilton and Towers**

Friday, 18 February	Saturday, 19 February	Sunday, 20 February	Monday, 21 February	Tuesday, 22 February	Wednesday, 23 February
Registration "Brain" Seminar <u>Only</u> 7:30 AM Hilton East Lounge	Registration 7:30 AM- 5:00 PM Hilton East Lounge	Registration 7:30 AM- 5:00 PM Hilton East Lounge	Registration 7:30 AM- 3:00 PM Hilton East Lounge	Registration 7:30 AM- 3:00 PM Hilton East Lounge	Registration 7:00 AM- Noon Hilton East Lounge
Seminar 8:30 AM - 11:00 PM Hilton See Program Book for details	Concurrent Sessions and Seminars 8:30 AM - 11:30 AM Hilton and Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 8:30 AM - 11:30 AM Hilton and Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 8:30 AM - 11:30 AM Hilton and Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 8:30 AM - 11:30 AM Hilton and Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 8:30 AM - 11:30 AM Hilton and Parc Fifty Five See program book for details
Public Science Day Youth Symposium 9:00 AM - 2:00 PM Hilton Continental Ballroom		Exhibitions 10:00 AM - 4:00 PM Hilton Grand Ballroom	Exhibitions 10:00 AM - 4:00 PM Hilton Grand Ballroom	Exhibitions 10:00 AM - 2:00 PM Hilton Grand Ballroom	
		Student Award Poster Competition 11:30 AM - 1:30 PM Hilton Grand Ballroom	Poster Sessions 11:30 AM - 1:30 PM Hilton Grand Ballroom	Poster Sessions 11:30 AM - 1:30 PM Hilton Grand Ballroom	
		Employment Exchange 12 Noon - 6:00 PM Hilton Franciscan A, B, C, D	Employment Exchange 9:00 AM - 5:00 PM Hilton Franciscan A, B, C, D	Employment Exchange 9:00 AM - 5:00 PM Hilton Franciscan A, B, C, D	Employment Exchange 9:00 AM - 2:00 PM Hilton Franciscan A, B, C, D
Registration 2:00 PM - 8:00 PM Hilton East Lounge	Topical Lectures 1:15 PM - 2:15 PM Hilton See program book for details	Topical Lectures 1:15 PM - 2:15 PM Hilton See program book for details	Topical Lectures 1:15 PM - 2:15 PM Hilton See program book for details	Topical Lectures 1:15 PM - 2:15 PM Hilton 1:00 PM - 2:00 PM Parc Fifty Five See program book for details	Topical Lectures 1:15 PM - 2:15 PM Hilton See program book for details
AJAS Oral Presentations 2:00 PM - 5:30 PM Hilton Toyon A-B Walnut A-B Monterey	Concurrent Sessions and Seminars 2:30 PM - 5:30 PM Hilton 2:00 PM - 5:00 PM Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 2:30 PM - 5:30 PM Hilton 2:00 PM - 5:00 PM Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 2:30 PM - 5:30 PM Hilton 2:00 PM - 5:00 PM Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 2:30 PM - 5:30 PM Hilton 2:00 PM - 5:00 PM Parc Fifty Five See program book for details	Concurrent Sessions and Seminars 2:30 PM - 5:30 PM Hilton 2:00 PM - 5:00 PM Parc Fifty Five See program book for details
Social Hour 5:30 PM - 6:30 PM Hilton Yosemite Foyer	Grand Opening Reception, Exhibitions, and AJAS Poster Session 5:00 PM - 6:30 PM Hilton Grand Ballroom		Social Hour 5:30 PM - 6:30 PM Hilton Yosemite Foyer	Social Hour 5:30 PM - 6:30 PM Hilton Yosemite Foyer	
Keynote Speaker <i>John H. Gibbons</i> 6:30 PM - 7:30 PM Hilton Continental Ballroom (4 and 5)	Plenary Lecture <i>Edward C. Stone</i> 6:30 PM - 7:30 PM Hilton Continental Ballroom (4 and 5)	President's Lecture <i>Eloise E. Clark</i> 6:30 PM - 7:00 PM Hilton Continental Ballroom (4 and 5)	Awards Ceremony 7:00 PM - 8:00 PM Hilton Imperial Ballroom	Plenary Lecture <i>TBA</i> 6:30 PM - 7:30 PM Hilton Continental Ballroom (4 and 5)	
		President's Social 7:00 PM - 8:00 PM Hilton Continental Ballroom (6 thru 9)			

# Meeting-At-A-Glance

## Time Schedule

All A.M. Sessions: 8:30 A.M. - 11:30 A.M. (Hilton)  
All P.M. Sessions: 2:30 P.M. - 5:30 P.M. (Hilton) and  
2:00 P.M. - 5:00 P.M. (Park Fifty Five)

## San Francisco Hilton & Towers

- |                            |                            |
|----------------------------|----------------------------|
| (1) Continental Ballroom 4 | (5) Continental Parlor 2   |
| (2) Continental Ballroom 5 | (6) Continental Parlor 3   |
| (3) Continental Ballroom 6 | (7) Continental Parlor 7   |
| (4) Continental Parlor 1   | (8) Continental Parlor 8-9 |

## Session Locator Chart

Saturday, 19 February

Sunday, 20 February

<b>Health Care Reform &amp; Advances in Medicine</b> (Hilton)	<b>A.M.</b> Increasing the Healthy Life Span: Advances in Health and Aging (1) <b>P.M.</b> Discovery of AIDS Therapies in an Era of Health Care Reform (1)	<b>A.M.</b> Ethical Issues in the Testing of Preventative HIV Vaccines (1) <b>P.M.</b> AIDS: Information Technology Supporting Research, Healthcare, and the Affected Community (1)
<b>The Changing Environment</b> (Hilton)	<b>A.M.</b> Valuing the Environment: Where Do We Stand? (4-5) <b>A.M.</b> Trade, Environment, and Food Security: Issues for Japanese and American Farmers (9) <b>P.M.</b> Monterey Bay Marine Sanctuary: A Natural Laboratory for Scientific Research (4) <b>P.M.</b> Whose Responsibility, for What, When? Responsibility Judgments for Disaster Consequences (5) <b>P.M.</b> Could We/Should We Engineer the Earth's Climate? (6)	<b>A.M.</b> Environmental Justice: Local, National and Global Perspectives (4-5) <b>A.M./P.M.</b> Critical Current Issues in Marine Biodiversity (15) <b>P.M.</b> Pacific Marine Science at Century's Close: Achievements and Prospects (4) <b>P.M.</b> Predicting, Mitigating, and Recovering from Disasters: The Role of the Information Infrastructure (5) <b>P.M.</b> Could We/Should We Engineer the Earth's Climate? (6)
<b>Evolution Revolution</b> (Parc Fifty Five)	<b>P.M.</b> Origins (20)	<b>A.M.</b> Current State of Origins of Life Research (20) <b>P.M.</b> Anti-science/Anti-evolution (20)
<b>Industry, Policy, and the Changing Infrastructure of Science</b> (Hilton)	<b>A.M.</b> The X Program: A Model for Government-Industry Collaboration (18) <b>A.M.</b> Building a US Technology Policy (12) <b>P.M.</b> New Directions in the Organization of Japanese Corporate R&D (12) <b>P.M.</b> Science after the SSC: Where Do We Go From Here? (8)	<b>A.M.</b> Managing the Globalization of Industrial R&D (12) <b>P.M.</b> Research Assessment: Best Friend or Junkyard Dog? (12)
<b>Science, Ethics &amp; Law</b> (Hilton)	<b>A.M.</b> Ethics in the Science Curriculum (8)	<b>A.M./P.M.</b> The Application of Forensic Sciences to Human Rights Investigation (8)
<b>Regional and International Security &amp; Defense Conversion</b> (Hilton)	<b>A.M.</b> Defense Conversion and Technology Transfer (7) <b>P.M.</b> Defense Conversion in California (7)	<b>A.M.</b> Effective Approaches to the Arms Trade (7) <b>P.M.</b> Nuclear Arms Reduction and Russian Laboratory Conversion Through Joint US/RF Cooperation (7)
<b>Frontiers in Engineering &amp; Physical Science Technology</b> (Hilton)	<b>A.M./P.M.</b> Frontiers of the Physical Sciences: 1994 (11)	<b>A.M.</b> Phase Transitions (11) <b>P.M.</b> Recent Advances in Lasers (11)
<b>Frontiers in Psychology &amp; Linguistics</b> (Hilton)	<b>A.M.</b> Face Recognition by Computers and People (19) <b>P.M.</b> New Findings on the Origins and Behavioral Consequences of Temperament (19)	<b>A.M.</b> Animal Behavior: Using Behavior-Genetic Analysis to Study Heredity and Behavior (19) <b>P.M.</b> Brain and Behavior: Biology Meets Public Health (19)
<b>Frontiers in Astronomy</b> (Parc Fifty Five)		
<b>Communicating Science</b> (Hilton)	<b>A.M./P.M.</b> Measuring the Impact of Public Understanding of Science Programs (17)	<b>A.M.</b> Designing Science Shows for Kids (17) <b>A.M./P.M.</b> The Science of Star Trek: Bringing Science to a Different Public (3) <b>P.M.</b> Rethinking Public Understanding of Science: Putting the Audience First (17)
<b>Science Education Reform</b> (Hilton)	<b>A.M.</b> Benchmarks for Science Literacy and the Project 2061 Vision (2) <b>P.M.</b> The Essential Role of the Science Community in K-12 Education Reform (2)	<b>A.M.</b> Using Benchmarks and Other Project 2061 Reforms Tools for Curriculum Planning (2) <b>P.M.</b> Changing the System: Getting Policymakers, Academics, and Community Leaders Behind Project 2061 Reform (2)
<b>Science for Everyone</b> (Hilton)	<b>A.M.</b> Science is Fun! (21) <b>A.M.</b> Youth Meets the Masters (10) <b>P.M.</b> Pseudo Opinion Pools: SLOP or Useful Data? (18)	<b>A.M.</b> Science, Nutrition, and California Cuisine (18) <b>P.M.</b> Acoustics: Sound of Science and Science of Sound (22)
<b>Societal Change: Population Trends and Urban Challenges</b> (Hilton)	<b>A.M.</b> The Changing Work-face: Women, Men, and the Dynamics of Inclusion (13) <b>P.M.</b> Dual-Career Marriages (13)	<b>A.M.</b> The Many Faces of Women Scientists: Resolving the Woman/Scientist Dilemma (13) <b>P.M.</b> Glass-Cutter Programs: Eliminating Barriers to Career Advancement (13)

## Seminars

Friday, 18 February

Saturday, 19 February

Sunday, 20 February

**A.M./P.M.** Mapping and Modeling the Brain (Hilton) (11)

**A.M./P.M.** Mapping and Modeling the Brain (Hilton) (3)  
**A.M./P.M.** Half the Secret of Life Is Outside the Cell (Parc Fifty Five) (23)

**P.M.** Eating and Health (Parc Fifty Five) (21)

At-A-Glance Room Assignments		Parc Fifty Five	
(9) Franciscan A-B	(13) Monterey	(17) Yosemite A	(20) Barcelona 1
(10) Franciscan C-D	(14) Teakwood A-B	(18) Yosemite B	(21) Barcelona 2
(11) Imperial Ballroom A	(15) Toyon A-B	(19) Yosemite C	(22) daVinci 1-2-3
(12) Imperial Ballroom B	(16) Walnut A-B		(23) Parc Ballroom 1-2-3

Monday, 21 February	Tuesday, 22 February	Wednesday, 23 February
<b>A.M.</b> Minding the Human Brain via Functional Magnetic Resonance Imaging (1) <b>P.M.</b> Imaging Systems for Health Education and Health Care Delivery (1) <b>P.M.</b> Social, Ethical, and Scientific Perspectives of Biological Research on Sexual Orientation (14)	<b>A.M.</b> Universal Design: Including People with Disabilities (1) <b>P.M.</b> Breast Cancer: the Environmental Connection (1) <b>P.M.</b> Current Perspectives on Pain Medicated by the Trigeminal Nerve (18)	<b>A.M.</b> Getting Under Your Skin: New Advances in Transdermal Drug Delivery (1) <b>P.M.</b> Potentials of Nanofabrication Science & Technology in the Biological Sciences (1)
<b>A.M.</b> Public Perceptions and Scientific Reality in Environmental Risks (4-5) <b>A.M.</b> Population, Agriculture, and the Environment in California (6) <b>A.M.</b> Biomedicine, Biotechnology, and Biodiversity: The Western Hemisphere Experience. (15) <b>P.M.</b> How Effective Are International Environmental Accords? (4) <b>P.M.</b> Resolving Africa's Environmental and Socioeconomic Problems (16) <b>P.M.</b> Recent Advances in Earthquake Disaster Mitigation (5) <b>P.M.</b> Global Change Update 1994: What Do We Know About Ozone? (6)	<b>A.M.</b> The Floods of 1993: Causes, Losses, and Responses (5) <b>A.M.</b> Climate Change, Cultural Complexity, and the Collapse of Civilizations (6) <b>A.M./P.M.</b> Sustainability From the Ground Up: Land and Soil Resources (15) <b>A.M./P.M.</b> Energy Research in Africa: Power and Development Beyond 2000 (4) <b>P.M.</b> Estimating the Impact of the California Drought (5) <b>P.M.</b> Charting the Biosphere: The Systematic Science Agenda (6)	<b>A.M./P.M.</b> Africa's Fragile Lakes: An Assessment of Social and Environmental Changes (4) <b>A.M./P.M.</b> Development and Use of Crop and Livestock Intellectual Property (5)
<b>A.M./P.M.</b> Diversity in Engineering: Oxymoron or Opportunity? (12) <b>P.M.</b> Is Science Becoming Just Another Interest Group? (12)	<b>P.M.</b> Research Universities in a Changing Funding Environment (12)	<b>A.M.</b> Benchmarking Technology from a Global Perspective (12)
<b>A.M.</b> Who's an Expert? Science and the Supreme Court (8) <b>P.M.</b> Linking Independent S&T Expertise to Courts: A Demonstration Project (8)	<b>A.M.</b> Scientists and Human Rights: Activists, Victims, and Advocates (8) <b>P.M.</b> Statistics and Information Management for Human Rights (8)	<b>A.M.</b> Coping with Crises: Sexual Harassment (8) <b>P.M.</b> Inner City Crime and Future Violence Initiatives (8)
<b>A.M./P.M.</b> Nuclear Weapons Dismantlement and Its Aftermath (7)	<b>A.M.</b> Arms Control and International Security: New Players, New Approaches (7) <b>P.M.</b> The Future of the Nuclear Nonproliferation Treaty and Regime (7)	
<b>A.M.</b> New Physics in the Bay Area (11) <b>P.M.</b> Highways and Toll Roads: Electronic Access in the 21st Century (11)	<b>P.M.</b> The Unreasonable Effectiveness of Number Theory (14)	<b>A.M.</b> Trace Substances: Impact of Recent Instrumental Advances on Regulatory Affairs (11) <b>P.M.</b> Calibrating Human History: The Impact of New Methods of Dating (11)
<b>P.M.</b> Comparative Linguistics and Historical Relationships (19)	<b>P.M.</b> Application of Behavior Science to Real-World Problems: The USS Vincennes (19)	<b>A.M.</b> Brain, Mind, and Language: Evidence from Aphasia (19) <b>P.M.</b> Inherited Speech and Language Disorders: In Search of a Phenotype (19)
<b>A.M./P.M.</b> Cosmology After COBE (20)	<b>A.M.</b> Changing Perspectives on the Planets (20) <b>P.M.</b> How California Astronomers Changed Our View of the Universe (20)	<b>A.M.</b> Cosmic Rain: The Bombardment of Earth (20) <b>P.M.</b> Gravitational Biology and Space Medicine (20)
<b>A.M.</b> Science, Lies, and Videotape (17) <b>P.M.</b> Is Visualization REALLY Necessary for Science, Engineering, and Medicine? (17)	<b>P.M.</b> Multimedia Information Systems Education: Harnessing Technologies (17)	
<b>A.M.</b> National Science Education Standards (2) <b>P.M.</b> The Third International Math and Science Study (TIMSS) (2)	<b>A.M.</b> Public Understanding of Basic Biomedical Concepts (2) <b>P.M.</b> Facing the Challenge: Building Scientific Literacy in a Multicultural and Multilingual Society (2)	<b>A.M.</b> National and International Tests: How Good Is the Science? (2) <b>P.M.</b> Women in Science and Engineering: to Be (or Not to Be) a Postdoc (2)
	<b>A.M./P.M.</b> Science for the Naked Eye, XXI (22)	<b>A.M.</b> Art and Mathematics (7) <b>P.M.</b> Science and the Sense of the Sacred (7)
<b>A.M.</b> Why Adaptation Becomes Maladaptive: The Dynamics of Population and Resource (13) <b>P.M.</b> Global Population, Food, Environment, and Ethics (13)	<b>A.M.</b> Immigrants in the United States: Impacts and Assimilation (13) <b>P.M.</b> Beyond the Boundaries of Nation-State: New Perspectives on Transnational Migration (13)	<b>A.M.</b> Changing America: Population Trends and Outlooks (13) <b>P.M.</b> Changes in American Families: Causes and Consequences (13)
Monday, 21 February	Tuesday, 22 February	Wednesday, 23 February
<b>A.M./P.M.</b> Evolution and Extinction (Hilton) (3) <b>A.M./P.M.</b> Eating and Health (Parc Fifty Five) (21)	<b>A.M./P.M.</b> Evolution and Extinction (Hilton) (3)	<b>A.M./P.M.</b> Evolution and Extinction (Hilton) (3)



# On-site Registration Form

AAAS Annual Meeting • 18–23 February 1994 • San Francisco

## REGISTRANT INFORMATION *(Please print clearly)*

Name \_\_\_\_\_  
First/given name Last/family name

Institution/Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIPCODE \_\_\_\_\_

Country \_\_\_\_\_

Daytime phone \_\_\_\_\_ Fax \_\_\_\_\_

AAAS member number (if member) \_\_\_\_\_

If registering at STUDENT rate, check here ☐ and present your valid student ID card to Cashier.

If registering at POSTDOCTORAL or K-12 TEACHER rate, indicate the name and number of your chairperson or principal.

Chairperson/principal's name

Chairperson/principal's phone number

## MEETING FEES *(no seminars/workshops)*

REGULAR	On-site Fee	One Day Fee	Day of Week (if One Day)		
<input type="checkbox"/> Member	\$195	\$ 98	<input type="checkbox"/> Fri	<input type="checkbox"/> Sat	<input type="checkbox"/> Sun
<input type="checkbox"/> Nonmember	\$250	\$125	<input type="checkbox"/> Mon	<input type="checkbox"/> Tue	<input type="checkbox"/> Wed
<b>SPECIAL</b>					
<input type="checkbox"/> Retired	\$ 70	Not Applicable			
<input type="checkbox"/> Postdoc <sup>1</sup>	\$ 70	Not Applicable			
<input type="checkbox"/> K-12 Teacher <sup>1</sup>	\$ 70	Not Applicable			
<input type="checkbox"/> Speaker	\$ 50	Not Applicable			
<input type="checkbox"/> Section Officer	\$ 50	Not Applicable			
<b>STUDENT</b>					
<input type="checkbox"/> Member	\$ 30	Not Applicable			
<input type="checkbox"/> Nonmember	\$ 50	Not Applicable			

## SEMINAR FEES *(Seminar attendees must also register for meeting, unless otherwise indicated.)*

	REGULAR		STUDENT		SPECIAL
	Member	Nonmember	Member	Nonmember	
<input type="checkbox"/> Mapping & Modeling the Brain	\$150	\$150	\$100	\$100	\$100
<input type="checkbox"/> Evolution & Extinction	\$150	\$150	\$100	\$100	\$100
<input type="checkbox"/> Eating & Health	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50
<input type="checkbox"/> Half the Secret of Life is Outside the Cell <i>(cosponsored by ASCB)</i>	\$ 10	\$ 10	\$ 5 <sup>5</sup>	\$ 10 <sup>5</sup>	\$ 20 <sup>5</sup>

## EXHIBITION ONLY FEE *(Admittance to the AAAS ☆94 Exhibition - February 19-22, 1994)*

☐ AAAS☆94 Exhibition \$ 25

## MEMBERSHIP DUES<sup>2</sup> *(Optional)*

If you are not a AAAS member, you can join now by checking the appropriate box below-- and take advantage of the discounted member registration fees below. You will also get a year's subscription (51 issues) to the journal *SCIENCE* at the lower 1993 rate.

	USA	CAN	INT'L
<input type="checkbox"/> Regular	\$87	\$146.59	\$182
<input type="checkbox"/> Postdoc	\$62	\$119.84	\$157
<input type="checkbox"/> Student	\$47	\$103.79	\$142
<input type="checkbox"/> Retired	\$47	\$103.79	\$142

## PAYMENT<sup>3</sup>

Meeting Registration fee ..... \$ \_\_\_\_\_

Seminar fee ..... \$ \_\_\_\_\_

Exhibition Only fee ..... \$ \_\_\_\_\_

Membership dues ..... \$ \_\_\_\_\_  
*(if joining now)*

TOTAL AMOUNT ..... \$ \_\_\_\_\_

☐ Check attached<sup>4</sup>

☐ Original institutional purchase order attached

☐ VISA ☐ MasterCard  
*(no other cards accepted)*

\_\_\_\_\_  
*(Credit card number)*

Exp. date \_\_\_\_\_

Signature \_\_\_\_\_

## IMPORTANT FOOTNOTES

- [1] Special rates: To qualify for the student rate, you must present your valid student ID card to the Cashier upon payment. To qualify for the postdoctoral or K-12 teacher rate, you must provide the name and phone number of your department chairperson or principal in the space provided. Registrations received without appropriate verification will be charged at the Regular rates.
- [2] Membership dues indicated herein are at the 1993 rates. Although dues increased on January 1, 1994, the 1993 rates are guaranteed through 23 February 1994 for registrants of the Annual Meeting; \$47 of dues plus international postage are allocated to *SCIENCE*. Please allow 4-6 weeks for receipt of your first issue of *SCIENCE*. Canadian rate includes GST #125488122.
- [3] Registration payments are nonrefundable except in the event of duplicate or over payments. All refunds will be processed after the meeting.
- [4] Checks must be in United States currency and must be payable on a U.S. bank.
- [5] Does not include meeting registration fee. Students and Specials only can register for this seminar without registering for the entire meeting.



# Science and HUGO Present THE GENES AND BEYOND

HORIZONS IN MEDICINE, BASIC RESEARCH, AND TECHNOLOGY

OCTOBER 2-5, 1994 WASHINGTON, D.C.

Mark your calendar now! For the fifth year, Science magazine and The Human Genome Organisation (HUGO) are pleased to sponsor the most comprehensive update on the genome project. The meeting will span issues in mapping, development, signal transduction, genome analysis, medical ethics, and policy.

The genome project is having a revolutionary effect on medical diagnosis, biotechnology, and investigations in cell and molecular biology.

- What are the newest advances in technology?
- How can the genome project be applied to understanding fundamental cellular processes?
- What are the latest developments in identifying disease genes?
- What are the social and policy issues facing us in the future?

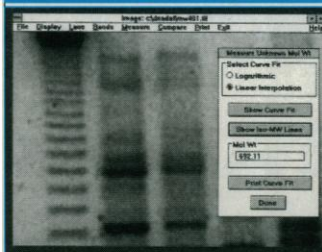
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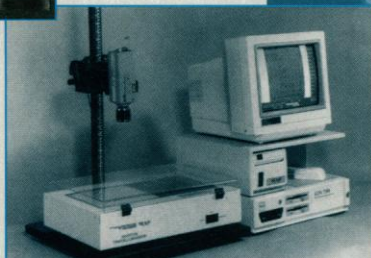
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• Quantitative and qualitative methods for studying cell adhesion molecules and their interactions. It is a simple, rapid, and sensitive method for measuring the binding of a specific ligand to a specific receptor. It can be used to study the binding of a ligand to a receptor, the binding of a receptor to a ligand, or the binding of a ligand to a receptor in the presence of a competitor.

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• A technique for measuring the binding of a specific ligand to a specific receptor. It is a rapid, sensitive, and quantitative method for measuring the binding of a ligand to a receptor. It can be used to study the binding of a ligand to a receptor, the binding of a receptor to a ligand, or the binding of a ligand to a receptor in the presence of a competitor.

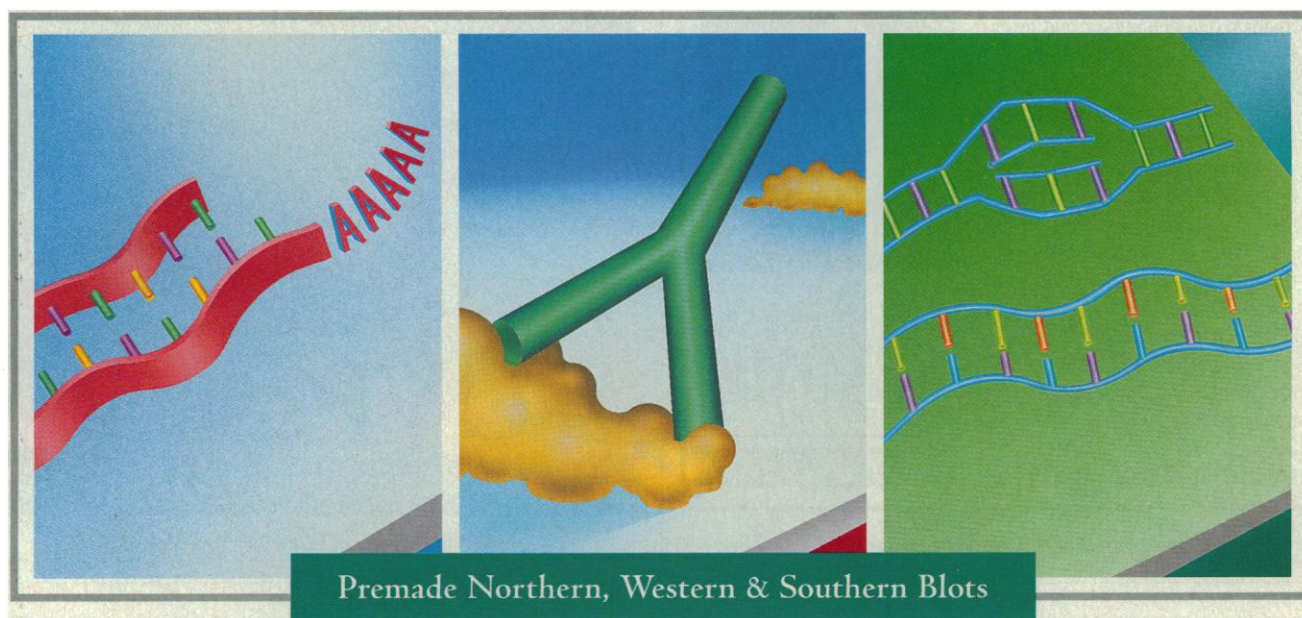
**Immunofluorescence**  
• A technique for visualizing the binding of a specific ligand to a specific receptor. It is a rapid, sensitive, and quantitative method for measuring the binding of a ligand to a receptor. It can be used to study the binding of a ligand to a receptor, the binding of a receptor to a ligand, or the binding of a ligand to a receptor in the presence of a competitor.

**Western Blotting**  
• A technique for measuring the binding of a specific ligand to a specific receptor. It is a rapid, sensitive, and quantitative method for measuring the binding of a ligand to a receptor. It can be used to study the binding of a ligand to a receptor, the binding of a receptor to a ligand, or the binding of a ligand to a receptor in the presence of a competitor.

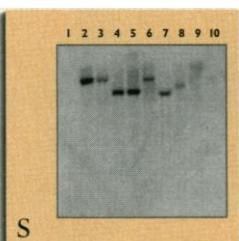
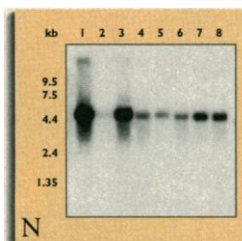
**Table Content:**  
The table lists various cell adhesion molecules (CAMs) and their characteristics. It includes columns for the molecule name, its function, and the techniques used to study it. 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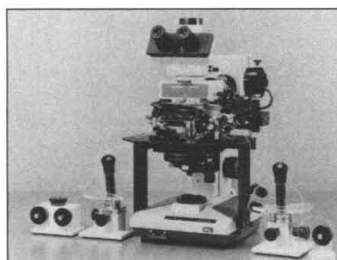
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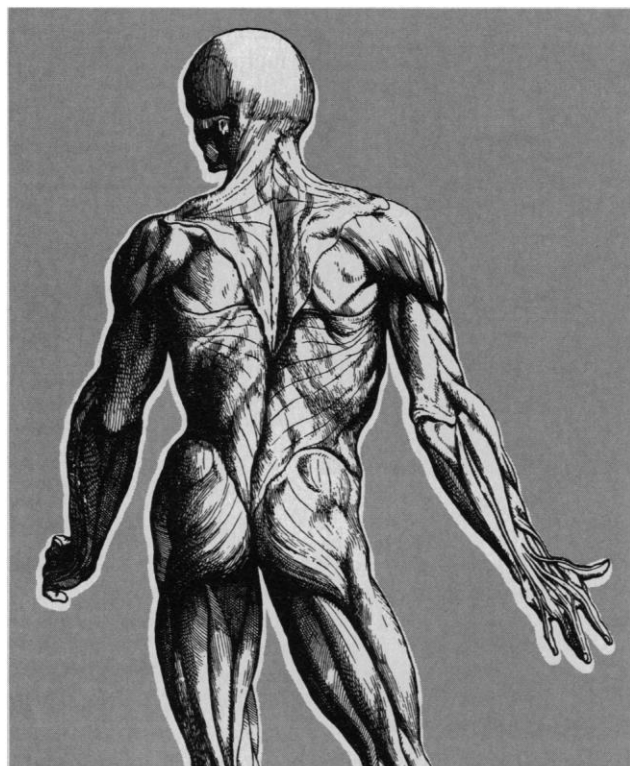
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Candidates sought for an **ASSISTANT** or **JUNIOR ASSOCIATE PROFESSOR** level faculty position in the field of integrative neuroscience. Possible research areas include the neural basis of sensation/perception, cognition, autonomic function, learning and memory and others. Candidates must have a doctoral degree. They will be expected to develop their own independent research program and teach. Focus is on candidates who see opportunity to work with nonhuman primate models as essential to their research career goals. Background in primate research desirable but not essential. Primary selection criteria will be history of scientific excellence and promise of continued research performance of highest scientific and academic caliber. Send statement of current and future research plans, curriculum vitae, and names of three references to: **Albert F. Fuchs, Ph.D., Chair, Search Committee, Regional Primate Research Center, SJ-50, University of Washington, Seattle, WA 98195. Telephone: (206) 543-8014.** Application closing date is March 1, 1994. *University of Washington is an Affirmative Action/Equal Opportunity Employer.*

The newly established Division of Circulatory Physiology at Columbia University College of Physicians and Surgeons invites applications for its growing biomedical research program. Plans for expansion are aimed at the creation of a world class research effort in the area of heart failure research. Basic scientists with expertise in the areas of molecular and cellular biology and basic pharmacology who have demonstrated excellence in conducting independent research are encouraged to apply. Candidates should be able to compete for extramural research support and possess either M.D. or Ph.D. in relevant field. Several positions will be available at the **ASSISTANT PROFESSOR, ASSOCIATE RESEARCH SCIENTIST and ASSOCIATE PROFESSOR** level. Academic appointment and compensation will be commensurate with experience. *We take Affirmative Action toward Equal Opportunity.* Please submit curriculum vitae, a brief statement of research interest, copies of representative publications and the names of three references to: **Milton Packer, M.D., Chief, Division of Circulatory Physiology, Columbia University, College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032.**

**FACULTY POSITION IN BIOLOGICAL CHEMISTRY AT FUHS/CHICAGO MEDICAL SCHOOL. ASSOCIATE PROFESSOR** (tenure-track) appointment available in the area of protein structure/function. Preference given to mechanistic, mutagenesis, folding, spectroscopic, or other physical/biochemical approaches. Systems of interest include receptors, growth factors, viral proteins, nucleic acid binding proteins, catalytic antibodies, etc. Candidates must have demonstrated productivity, an established, independent, research program, and the potential for further growth. The excellent research environment and modern facilities of the school are located in a pleasant North Shore suburb 30 miles north of the Loop. Send letter of application, curriculum vitae, names of references, description of research, and statement of current funding to: **Dr. K.E. Neet, Chairman, Department of Biological Chemistry, FUHS/Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064. An Equal Opportunity/Affirmative Action Employer.**

Biology Department, Salisbury State University, invites applications for two ten-month tenure-track positions in invertebrate biology and plant ecology at the rank of **ASSISTANT PROFESSOR** beginning fall 1994. Ph.D., evidence of teaching excellence, and research potential required. Applicants are expected to teach introductory and upper-level undergraduate courses, and pursue scholarly activity and sponsor undergraduate research students. Salary is competitive and commensurate with experience. Send curriculum vitae, all transcripts and three letters of recommendation by February 25, 1994, to: **Dr. William Grogan (Invertebrate Biology) or Dr. Dan Sistrunk (Plant Ecology), Biology Department, Salisbury State University, Salisbury, MD 21801. Salisbury State University is an Affirmative Action/Equal Opportunity Employer. Qualified women, minorities and disabled persons are encouraged to apply.**

## POSITIONS OPEN

### GENE THERAPY MONTREAL NEUROLOGICAL INSTITUTE MCGILL UNIVERSITY

The Montreal Neurological Institute (MNI) invites applications for a tenure-track faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. We are seeking an individual with an interest in somatic cell gene therapy of neurogenetic diseases to expand our current efforts in this field. The successful candidate should have expertise in the biology of viral and other gene delivery systems and will be expected to develop a strong independent research program and to participate in graduate training. The MNI has a stimulating academic environment with excellent laboratory and clinical facilities for implementation of gene therapy trials. Many possibilities also exist for collaboration within the McGill and Montreal communities. Candidates should submit curriculum vitae, a brief statement of research interests and arrange for three letters of reference to be sent to: **Dr. Eric A. Shoubridge, Chairman, Gene Therapy Search Committee, Montreal Neurological Institute, 3801 University Street, Montreal, Quebec, Canada H3A 2B4.**



### CELL BIOLOGIST/HISTOLOGIST

The Department of Anatomy, College of Medicine, University of Saskatchewan, Saskatoon, Canada, invites applications for a tenure-track faculty appointment at the rank of **ASSISTANT PROFESSOR**. The appointee will participate in the cell biology and histology teaching programs of the department and teaching experience in these areas is desirable.

Applicants must have postdoctoral training and an active research program in cell biology or the anatomical sciences. The successful candidate will be expected to actively contribute to graduate courses and training in his/her area of research specialty. The Department has excellent facilities for research utilizing tissue culture, electron microscopy, cell and molecular biological techniques.

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

An application, including curriculum vitae, names of three referees, and a statement of proposed research and previous teaching experience should be submitted by 15 March 1994 to:

**Dr. Gary D. Burkholder  
 Department of Anatomy  
 College of Medicine  
 University of Saskatchewan  
 Saskatoon, Saskatchewan  
 Canada S7N 0W0**

**CELL/MOLECULAR BIOLOGIST.** Ph.D. required. Tenure-track position at the **ASSISTANT PROFESSOR** level in an eight-member department. Duties include but not limited to teaching three terms some combination of major and/or non-major General Biology, upper-level Cell and Molecular Biology. Develop research program including supervision of student research, serve as advisor to major students. Serve on various Departmental and University committees. Continue development of a Cell/Molecular Biology area within the department curriculum and gradually assume responsibilities for premedical program. The University and Department emphasize superior teaching and close student-faculty interaction. Interpersonal skills important. Letter of interest, current curriculum vitae, undergraduate and graduate transcripts and three letters of reference should be sent to: **Dr. R.A. deLanglade, Chair Biology, Wittenberg University, Box 720, Springfield, OH 45501-0720 by March 1, 1994.** Candidates are expected to have a firm commitment to excellence in teaching and professional or creative activity in the context of a church-related liberal arts and sciences undergraduate institution. *Wittenberg is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minority candidates.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR:** The Biology Department of Queens College of the City University of New York is seeking applications for a full-time, tenure-track position to begin in fall 1994. Applicants must have a Ph.D., appropriate postdoctoral training, and a demonstrated ability to establish a strong independent research program using cellular and molecular approaches to **Microbiology** or **Plant Physiology**. Salary range is \$29,931 to \$50,205 (commensurate with qualifications and experience) and start-up funds will be available. The Department has excellent laboratory space in a new building provided with high-quality core equipment and animal facilities. Queens College offers a stimulating scientific environment and is committed to high-quality research and teaching. Participation in both undergraduate and doctoral-level courses is expected. Candidates should submit curriculum vitae and arrange for three letters of recommendation be sent to the Search Committee. A summary of present and future research interests is also required. Review of complete applications will begin on March 15, 1994, but applications will be accepted until search is closed; all materials should be sent to: **Dr. Jared L. Rifkin, Chair, Biology Department, Queens College of CUNY, Flushing, NY 11367-1597.**

*Queens College/CUNY is an Affirmative Action/Equal Opportunity Employer. Women, minorities and disabled individuals are encouraged to apply.*

**ASSISTANT OR ASSOCIATE PROFESSOR OF MEDICINE (ONCOLOGY) STANFORD UNIVERSITY SCHOOL OF MEDICINE**—One full-time position at Stanford University Medical Center. Candidates should be fully trained in medicine and the subspecialty of oncology. They should be prepared to establish an independent laboratory program in some area of cancer research. Applicants with interest in cell biology, molecular biology, immunology, or genetics and in the translation of scientific methods and discoveries to problems in clinical oncology are especially encouraged. Salary support, laboratory space and start-up funds are available for this position, but there should be evidence of ability of the candidate eventually to obtain peer-reviewed research funding. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* Please send curriculum vitae, a statement of career plans, and three names of references to: **Ronald Levy, M.D., Chief, Division of Oncology, Stanford University School of Medicine, SUMC M211, Stanford, CA 94305-5306.**

## IMMUNOLOGIST

The Department of Biology at Loyola University Chicago seeks an immunologist for a tenure-track position at the level of **ASSISTANT PROFESSOR**, beginning August 1994. Ph.D. and postdoctoral experience required. The candidate will teach at both the undergraduate and graduate levels, develop an active research program, and direct M.S. graduate students. Applicants should submit a letter of application, curriculum vitae, statement of teaching and research interests, significant reprints, and have three letters of recommendation forwarded to: **Dr. John Smarrelli, Chairperson, Department of Biology, Loyola University Chicago, 6525 North Sheridan Road, Chicago, IL 60626. FAX: 312-508-3646.** Applications will be accepted through February 25, 1994. *Loyola University Chicago is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF BIOLOGY.** Tenure-track, September 1994. Instruct multiple sections of human anatomy and physiology for health majors. Prefer candidates with experience in **environmental toxicology**. Potential for involvement in a Master's program in Environmental Science. Earned Ph.D., evidence of effective teaching required. Interest in research and grant writing desirable.

Send curriculum vitae; a statement of goals, interests, experiences, and abilities; names, addresses and telephone numbers of three references to: **Dr. George E. Stanton, Chair, Department of Biology, Columbus College, Columbus, GA 31907-5645.** Review of candidates from February 15, 1994, until position filled or search terminated.

*We desire a diverse faculty and particularly invite applications from groups historically underrepresented in academic science. COLUMBUS COLLEGE is an Equal Employment Opportunity/Affirmative Action/TITLE IX Employer.*

## POSITIONS OPEN

### PLANT BIOLOGIST State University College at Buffalo

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** to begin September 1994. We are seeking a colleague who is enthusiastic about teaching undergraduates. Primary teaching responsibility will be introductory botany for majors and biology for non-majors with opportunities to teach advanced undergraduate and graduate courses. Area of research specialization is open, but we especially welcome applications from candidates with expertise in vascular plant morphology, wetland plants, aquatic plants/phytoplankton, or applied plant science. The successful candidate will be expected to develop an active research program involving undergraduate and Master's students. Applicants must have a Ph.D., postdoctoral experience preferred. Send curriculum vitae with a statement of teaching philosophy, research goals and three letters of recommendation by March 1, 1994, to: **Dr. Javier Peñalosa, Chair, Department of Biology, State University College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222.** *We encourage applications from women and minorities.*

### BIOMETEOROLOGY POSITION AT YALE UNIVERSITY

Applications are invited for the position of **ASSISTANT PROFESSOR** of Biometeorology in the School of Forestry and Environmental Studies at Yale University. The successful applicant will be expected to develop a strong research program that emphasizes micro- and meso-scale atmospheric exchange of energy, water, trace gases, particles or other pollutants. Teaching duties will involve the development of at least two graduate-level semester courses and participation in team-taught courses and seminars as appropriate along with student independent-project supervision.

Please send curriculum vitae; a summary of research and teaching interests; the names, addresses, and telephone numbers of three references; and reprints and other examples of academic and professional work to: **Prof. William Smith, Co-Chair, Biometeorology Search, Yale University, School of Forestry and Environmental Studies, 370 Prospect Street, New Haven, CT 06511.**

The deadline for applications is March 18, 1994, or until a suitable applicant is found. For further information contact: **Prof. W. Smith at 203-432-5155 or Prof. Ronald B. Smith at 203-432-3161.**

*Yale University is an Equal Opportunity/Affirmative Action Employer. Women and minority group members are encouraged to apply.*

### DIRECTOR OF GENE THERAPY VECTOR CORE

The University of Iowa College of Medicine, Department of Internal Medicine, is seeking a Director of the Gene Therapy Vector Core. The main goal of the Vector Core is to further the interest in and facilitate the development of gene transfer as a therapeutic modality for treating human disease. The Director will pursue this goal in several ways. Person will be encouraged to develop collaborations with investigators in basic and clinical departments throughout the College. Collaboration may involve the production of a number of gene transfer vectors as well as assistance and direction in the development of appropriate protocols for testing hypotheses relevant to gene transfer to treat disease. The director would be encouraged to develop new vectors for gene transfer that might have either specific or broad applications. The Director would collaborate and consult on the design and development in *in vitro* and *in vivo* preclinical studies focused on assessing safety and efficacy of gene transfer. The training of investigators in the use and development of new vectors would also be an important aspect of the position. Requires a Ph.D. or the equivalent combination of education and experience as well as several years of independent research work. This work will be evidenced by publications, inventions and the like which have had considerable impact and value to the person's field or discipline. Experience in animal virology, previous development of vectors for gene transfer and experience in the area of gene therapy is desirable. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Send résumé to: **Personnel, Internal Medicine, SE 315 GH, University of Iowa, Iowa City, IA 52242.**

## POSITIONS OPEN

### ASSISTANT PROFESSOR PLANT PHYSIOLOGY

The College is seeking a Plant Physiologist at the Assistant Professor level in an academic-year, tenure-track position. Candidates must have a Ph.D. in higher plant physiology. Broad training and research interests in physiology of vascular plants, plant/microbe interactions or ecological physiology are preferred. Postdoctoral experience and knowledge of molecular biology desirable. The successful candidate is to participate in instruction at both undergraduate and graduate levels, to develop an extramurally funded research program, to interact with pathologists, ecologists, microbiologists and molecular biologists and to participate in the College's service activities. Submit curriculum vitae, transcripts, teaching and research goals, and have three letters of reference sent directly to: **Dr. H. B. Pepper, Chair, Search Committee, Environmental and Forest Biology, SUNY College of Environmental Science and Forestry, One Forestry Drive, Syracuse, NY 13210** by March 25, 1994. *Women and minorities are encouraged to apply. An Equal Opportunity/Affirmative Action Employer.*

**BIOLOGICAL CONTROL. ASSISTANT PROFESSOR,** tenure-track (80% research, 20% extension). Ph.D. in entomology or related field required with experience in applied aspects of biological control of arthropods and an interest in promoting grower adoption of biological control practices. Although research does not have to be directed to a specific commodity, some assistance in biological control is expected to the apple program in North Carolina. Submit a letter stating research and extension goals, official transcripts, curriculum vitae, pertinent reprints, and the names of four references to: **Dr. J. D. Harper, Department of Entomology, Box 7613, North Carolina State University, Raleigh, NC 27695-7613** by 1 April 1994. *NCSU is an Equal Opportunity Employer and operates under Affirmative Action Policy.*

### CHAIRMAN BIOCHEMISTRY AND MOLECULAR BIOLOGY

The University of Miami seeks applications from scientists with strengths in the area of molecular biology to fill the position of Chairman of the Department of Biochemistry and Molecular Biology. The University of Miami has significant resources that will be committed to enable the new Chair to strengthen and develop the Department. The Markey Foundation has committed a grant of over \$5 million to assist the University in attracting an outstanding individual to lead the Department. The new Chair will recruit a number of new faculty, as well as replace several positions due to anticipated retirements. The Department is housed in a new building of its own, and adequate space is available for expansion. There are presently 16 faculty whose research funding is approximately \$2 million in direct costs. Faculty in mid-career with outstanding research records are encouraged to apply. Send letter of application, curriculum vitae, statement of research interests, description of administrative philosophy and teaching experience, three publications, and the names of four references before February 28, 1994, to: **Dr. Karl L. Magleby, Chairman Department of Physiology and Biophysics (R430), University of Miami School of Medicine, P.O. Box 016430, Miami, FL 33101.** *The University of Miami is an Affirmative Action/Equal Opportunity Employer.*

**INFECTIOUS DISEASES:** The Department of Pediatrics at the Medical College of Wisconsin has two openings for full-time faculty. Rank open. These positions represent an expansion of the current Infectious Diseases Section to enhance a core group investigating common pediatric lower respiratory viruses. Interested applicants may hold either Ph.D., M.D., or M.D./Ph.D. degrees. Those holding the M.D. degree should be Board certified in Pediatrics and have completed a pediatric infectious diseases fellowship program. Preference will be given to applicants with training and experience in the technical, biological, and molecular approaches to understanding the epidemiology, pathogenesis, and prevention of common lower respiratory viruses in children. Please direct inquiries with curriculum vitae and the names of two references to: **M. J. Chusid, M.D., Department of Pediatrics, MFRC, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.** *Equal Opportunity/Affirmative Action Employer, M/F/D.*



**Alexion**

Pharmaceuticals, Inc.

**ALEXION PHARMACEUTICALS, INC.**, is an innovative, dynamic and rapidly growing biotechnology company engaged in the discovery and development of novel therapeutics for the treatment of immunologic, cardiovascular and hema-

tologic diseases. Because of our rapid progress in product development, we have immediate openings for several BS or MS scientists with 1-3 years experience to join our growing Process Development, Molecular Development and Immunobiology Groups.

### **Process Development Protein Biochemistry and Purification**

- Qualified candidates will have experience in protein purification and characterization. A working knowledge of protein purification techniques such as HPLC, affinity chromatography and electrophoresis is desired. Experience with Western blot and ELISA is a plus. **Respond to position TT.**

### **Fermentation**

- Qualified candidates will assist in small and large scale microbial fermentation. Knowledge of microbial physiology, biochemistry and computer data analysis is a plus. **Respond to position JW.**

### **Molecular Development Virology**

- Candidates will have experience in molecular biological techniques. Additional experience in cell biology is desirable. **Respond to position JM.**

### **DNA Sequence Specialist**

- We are seeking a person to work in a small, highly interactive team environment to set up and run a core nucleic acid facility. Applicants must possess a thorough working knowledge of oligonucleotide chemistry/synthesis and DNA sequencing techniques, especially automated fluorescent sequencing. **Respond to position JPM.**

### **Immunobiology Molecular Immunology**

- Qualified candidates will have experience in molecular biological techniques including PCR, nucleic acid hybridization and cDNA expression cloning. Knowledge of mouse genetics and tissue culture experience is helpful. **Respond to position EE.**

### **Cellular Immunology**

- Qualified candidates will have proficiency in cell culture, flow cytometry and nucleic acid methodologies. Experience in the isolation and characterization of human T cell clones is desirable. **Respond to position MCS.**

We offer a competitive salary and benefits package, relocation assistance and a generous stock option plan. We are located in south central Connecticut, 1 hour from New York and 2 hours from Boston, in an area of many attractive and affordable communities, nationally ranked school systems and in close proximity to a major academic medical center, Yale University. **For exciting growth and career development, please forward your curriculum vitae, specifying the position code, to:**

Human Resources  
Alexion Pharmaceuticals, Inc.  
25 Science Park, New Haven, CT 06511

*Equal Opportunity Employer*

## **RESEARCH ENGINEER/ SCIENTIST**

The Energy and Environment Division of the Lawrence Berkeley Laboratory currently has an opening for a Staff Scientist to conduct research on building energy performance and related indoor air quality issues in the Energy Performance of Buildings Group of the Indoor Environment Program.

Current focus will be on projects relating to thermal energy distribution systems in buildings, ranging from residential duct systems to large commercial-building HVAC complexes. The work involves development of new duct system technologies, detailed and simplified simulation models of integrated thermal, air-flow & HVAC-system performance, national standards for thermal distribution system efficiency and field experimentation on existing buildings and new technologies. Other responsibilities include project management, supervision of graduate students/research associates, and oral/written presentation of research findings.

Requires extensive background/experience in one or more of the following areas: basic or applied fluid mechanics or heat transfer; aerosol science and technology; large-scale field monitoring; large computer simulation codes (preferably building related); energy technology development; and IAQ measurement and modeling techniques. Substantial experience in independent research communication also required. Ph.D. in mechanical engineering, chemical engineering, or physical science; experience in Building Science, especially HVAC and thermal distribution; and experience in interdisciplinary research preferred.

Please send resume and salary requirements to: **Lawrence Berkeley Laboratory, Staffing Office, Box #JSC12081, One Cyclotron Road, Berkeley, CA 94720.** An equal opportunity employer.



**LAWRENCE BERKELEY LABORATORY**  
UNIVERSITY OF CALIFORNIA  
U.S. Department of Energy

## **ASSISTANT PROFESSOR** Department of Zoology The University of British Columbia

Applications are invited for a tenure-track position at the Assistant Professor level in the Department of Zoology, University of British Columbia. Appointment may be considered at a higher rank for a senior woman with exceptional qualifications. Salary will be commensurate with education and experience.

The Department of Zoology currently comprises 36 faculty members, approximately 35 postdoctoral fellows and research associates, and 140 graduate students. Preference will be given to candidates with at least 2 years' postdoctoral experience and with demonstrated excellence in research that complements the present strengths in the department. We require an animal population geneticist with strong theoretical skills. Experience with molecular biology approaches to this discipline will be considered an additional asset. The appointee will be expected to develop a strong research program, and teach in appropriate undergraduate courses, including biostatistics. **Starting date will be January 1 or July 1, 1995.** Appointment is subject to final budgetary approval.

**Closing date for application is June 1, 1994.**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. UBC welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities.

Curriculum vitae, 3 letters of reference, and a brief outline of research interests should be submitted to:



Dr. J.E. Phillips  
Head, Department of Zoology  
University of British Columbia  
#2354-6270 University Boulevard  
Vancouver, B.C. CANADA V6T 1Z4  
Fax: (604) 822-2416



## POSITIONS OPEN

### MANAGER OF R&D IN ISRAEL

Xenograft Technologies, Ltd. is seeking a senior immunologist with 5 to 15 years of experience in product development in the pharmaceutical or biotechnology industry to lead its R&D efforts in Rehovot. Candidates should have direct experience in developing monoclonal antibody-based therapeutic products. Contact: **President, 2044 Columbus Parkway, Benicia, CA 94510; (FAX: 707/747-7010) or General Manager, P.O. Box 370, Rehovot 76100.**

**CHAIR** has been created as part of a new initiative in the University. New lectureships will also be associated with this initiative and the new Professor will be expected to have some input to these appointments. This is a unique opportunity for a cell or developmental biologist with an exceptional research record to join a dynamic research School with strong underpinning in biochemistry, biophysics and molecular biology. Informal enquiries should be directed to: **Professor Anthony R. Rees (Telephone: +44 225 826403; E-mail: A.R.Rees@bath.ac.uk).** Further particulars may be obtained from: **Peter J. Hill, Director of Personnel, University of Bath, Claverton Down, Bath BA2 7AY, Great Britain; (Telephone: +44 225 826026; FAX: +44 225 826559; E-mail: p.j.hill@uk.ac.bath).**

Closing date for applications: 28 February 1994.

*Working towards equal opportunities.*

**BIOLOGY FACULTY:** Wilkes University invites application from **MOLECULAR BIOLOGIST** with commitment to excellence in teaching and scholarship. Ph.D. and postdoctoral teaching experience required. Responsibilities include teaching Cell and Molecular Biology and Plants and Human Affairs, conduct research, and assist in the Doctor of Pharmacy program. Areas of interest include botanical pharmacology, pharmacology, plant/insect interaction, and plant tissue culture.

Wilkes is a comprehensive, independent nonsectarian private university with a public mission. It maintains a total enrollment of about 3100, and is located in the Pocono region of northeastern Pennsylvania, with easy access to Washington, D.C., Boston, New York, and Philadelphia.

Submit résumé, transcripts, statement of teaching philosophy, and three recommendation letters to: **Associate Dean (Biology), School of Science and Engineering, Wilkes University, Wilkes-Barre, PA 18766. WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY. Affirmative Action/Equal Opportunity Employer.**

### RESEARCH FACULTY AND POSTDOCTORAL FELLOW IBMS, ACADEMIA SINICA

A newly formed Infectious Disease Research Group seeks qualified scientists in the areas of virology, bacteriology, parasitology and immunology, preferentially related to infectious diseases. Candidates for faculty positions should have a minimum of two years of postdoctoral experience in the related fields and should submit a research proposal. The group also seeks application of postdoctoral fellows in the study of cytokines, molecular parasitology, DNA tumor virus and RNA virus replication. Please send résumé and three names of references to: **Dr. Ming-Ta Hsu, Infectious Disease Group, IBMS, Academia Sinica, Nankang, Taipei, Taiwan, Republic of China. (FAX: 02-782-5573).**

### POSTDOCTORAL POSITION IN PHYSIOLOGY

Extending search for spring 1994 to study the Physiology and Biophysics of the Microcirculation. Current studies include: (1) Mechanisms of fluid exchange and biophysical nature of the exchange barrier in single capillaries; (2) Mechanisms of force generation and movement of single neutrophils and macrophage migration *in vitro* and *in vivo*; (3) Pharmacomechanical determinants of arteriolar function in single, isolated arterioles. Future studies to include the mechanical properties of cell membranes and their influence on single channel function. Salary dependent upon experience. Applications accepted until position filled. Send curriculum vitae and the names of three references to: **Dr. Robert W. Gore, Department of Physiology, University of Arizona, Tucson, AZ 85724. Gore@ccit.arizona.edu (E-mail); (602) 626-2382 (FAX). University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.**

## POSITIONS OPEN

**INSECT PHYSIOLOGIST**—A 9- or 12-month tenure-track research/teaching position. Develop research program in toxicology/biochemistry, ecophysiology, molecular biology, endocrinology, or natural products chemistry. Teach insect physiology, participate in graduate/undergraduate teaching. Submit curriculum vitae, statement of research interests, names of 3 references to: **B.A. Croft, Chair, Search Committee, Department of Entomology, Oregon State University, Corvallis, OR 97331-2907. Closing date: April 1, 1994. Position available: July 1, 1994. Oregon State University is an Affirmative Action/Equal Employment Opportunity Employer and is responsive to dual-career needs.**

**POSTDOCTORAL POSITIONS** available immediately to study enzymes of *Cryptosporidium parvum* de novo folate biosynthesis as chemotherapeutic targets. Cloning and expression of genes encoding TS-DHFR and PPPK-DHPS; structure-function analyses of active sites, mechanisms and expression of drug resistance. Prior experience in molecular biology and enzyme biochemistry required. Please send or FAX a description of research experience, curriculum vitae and the names, addresses and telephone numbers of three references to: **Dr. Richard G. Nelson, Division of Infectious Diseases, San Francisco General Hospital, University of California at San Francisco, Box 0811, San Francisco, CA 94143-0811; FAX: 415-206-6015. UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

**POSTDOCTORAL POSITION—MARINE MICROBIOLOGY** is available immediately for a Postdoctoral Research Associate to investigate the relationship between microbial community composition and community metabolic capabilities in coastal bacterioplankton communities. We are looking for someone with experience in molecular biology, preferably with training in microbiology or aquatic microbial ecology. This is a 2.5-year, full-time position at a starting salary of approximately \$30,000 per annum and a full benefits package. We expect the successful candidate to join the project by September 1 and preferably by June 1, 1994. **Telephone: (415) 435-7100** for further information. To apply, send a cover letter with curriculum vitae and the names, addresses and telephone numbers of at least 3 references to: **Dr. J. T. Hollibaugh, Tiburon Center, SFSU, P.O. Box 855, Tiburon, CA 94920; by March 1, 1994. San Francisco State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are particularly urged to apply.**

### POSTDOCTORAL ASSOCIATE VIRAL BASED GENE TRANSFORMATION OF SKELETAL MUSCLE CELLS

Applications are invited for a Postdoctoral Associate position to study the mechanisms of viral based recombinant gene expression in skeletal muscle cells. The successful applicant will join a team working on various aspects of neuromuscular disorders ranging from linkage to gene therapy in a fully equipped, newly renovated laboratory. Experience in various aspects of molecular biology as well as recombinant gene expression is preferred. Experience in adenovirus or parvovirus research is a plus. Position is available immediately. Please send curriculum vitae and names, addresses and telephone numbers of three references by February 28, 1994, to: **Richard J. Bartlett, Ph.D., Head, Neurogenetics and Gene Therapy, Department of Neurology, University of Miami School of Medicine, Miami, FL 33136. (305) 547-5858 (Voice), (305) 548-4678 (FAX).**

### POSTDOCTORAL ASSOCIATE

Postdoctoral position available immediately to study the molecular basis of hereditary cancer in an experimental model. Bachelor's in Molecular and Developmental Biology preferred. Send curriculum vitae and names of three references to: **Dr. Raymond Yeung, c/o Human Resources Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION. Physiology of extrastriate visual cortex.** The relationship between the physiology of extrastriate cortex and visual perception is being studied in the alert monkey preparation. The ideal candidate would have experience with physiology or vision, and be comfortable around computers. Please send curriculum vitae and references to: **Dr. Kenneth H. Britten, Center for Neuroscience, 1544 Newton Court, Davis, CA 95616. Telephone: (916) 754-5080, FAX: (916) 757-8827. The University of California is an Equal Opportunity Employer.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Postdoctoral training positions available immediately and continuing through 1994. Selected trainees will work in the research programs of **George E. Stelmach (ASU)** and **James R. Bloedel (BNI)**. Research will focus on assessing motor deficits and sensorimotor adaptation and learning in Parkinson and cerebellar patients. Experience with human subjects, the kinematics and dynamics of human movement, and good quantitative skills required. Send letter, curriculum vitae, and three letters of reference to: **George E. Stelmach, ESRI, ASU, Tempe, AZ 85287-0404; Telephone: 602-965-9847, FAX: 965-8108, E-mail: Stelmach@ESPEI.LA.ASU.EDU. Equal Opportunity Employer/Affirmative Action.**

### POSTDOCTORAL POSITION

Panlabs, Inc., a biotech company located northeast of Seattle, Washington, is inviting a recent Ph.D. to join a 3-year NIH-funded project to study the role of growth factors in the development of human benign prostatic hyperplasia (BPHG). Qualified candidate will have a background in tissue culture with experience in the purification and molecular biology of growth factors. Send or FAX résumé/curriculum vitae and names of three references to: **Panlabs, Inc., Attention: Human Resources (Position #93-50), 11804 North Creek Parkway South, Bothell, WA 98011; FAX: 206-487-3787.**

**BIOPHYSICS POSTDOCTORAL POSITION** available immediately to participate in an ongoing research program on protein structure and function, specifically the inositol-cleaving phospholipases. Must be experienced in NMR as applied to biological systems. Excellent facilities and opportunities for collaborative studies with organic chemists and molecular biologists. Send curriculum vitae and arrange for 3 letters of reference to be sent to: **Dr. O. Hayes Griffith, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403. FAX: (503) 346-5891; E-mail: hayes@imagel.uoregon.edu. Applications accepted until February 25, 1994. The University of Oregon is an Equal Opportunity/Affirmative Action/ADA Institution committed to cultural diversity.**

**POSTDOCTORAL POSITION CELLULAR AND MOLECULAR NEUROENDOCRINOLOGY** available immediately for research in studying the effects of alcohol and transforming growth factor- $\beta$  on POMC and prolactin genes transcription and expression. Experience with recombinant DNA technology and cell cultures required. Send curriculum vitae and three letters of reference to: **Dr. Dipak K. Sarkar, Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology, Washington State University, College of Veterinary Medicine, Pullman, WA 99164-6520; FAX: (509) 335-4650. Application review will begin February 11, 1994. WSU is an Affirmative Action/Equal Opportunity Employer. Protected group members encouraged to apply.**

### POSTDOCTORAL POSITION IN SIGNAL TRANSDUCTION AND CARCINOGENESIS

A unique transgenic mouse model for the expression of Insulin-like growth factor II (IGF-II) has been developed. The transgenic mice develop a wide spectrum of malignancies and also have lowered body fat content. A position is available immediately to study signal transduction pathways involved in the metabolic and carcinogenic effects of IGF-II in this animal model. Applicants should have a Ph.D. degree with experience in endocrinology, physiology, biochemistry and/or molecular genetics. Send curriculum vitae and names of three references to: **Charles E. Rogler, Ph.D., Liver Research Center, (Ullmann 613), Albert Einstein College of Medicine, Jack & Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.**

*An Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH POSITION** available for two years to study molecular biology and electrophysiology of cloned human cardiac potassium channels. Experience in molecular biology and/or patch clamp methods desirable. Opportunity to interact with a number of different investigators and groups. Applications, including curriculum vitae and names of three referees to: **Dr. David Fedida, Department of Physiology, Queen's University, Kingston, Ontario, Canada K7L 3N6. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents.**

## Neurochemistry and Neuropharmacology of Schizophrenia

The University of Calgary Department of Psychiatry invites applications for a full-time academic position at the Assistant Professor level or higher as a Clinical Investigator in the Neurochemistry and Neuropharmacology of Schizophrenia to be responsible for research, patient care and teaching.

This position offers an excellent opportunity to develop an independent research program and collaborative interactions within a multidisciplinary research environment.

Qualifications include an MD and PhD, and eligibility for licensure in the Province of Alberta. The selected candidate must compete successfully for salary and establishment support from the Alberta Heritage Foundation for Medical Research, will have 75% of time protected for research, and will be affiliated with the Behavioural Sciences and Neuroscience Research Groups in the Faculty of Medicine.

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

Please submit a current curriculum vitae and the names of three referees by March 31, 1994, to:

**Dr. D.E. Addington, Chair**  
Behavioural Sciences Research Group  
Department of Psychiatry  
1403 - 29 Street N.W.  
Calgary, Alberta, Canada T2N 2T9



National Library of Medicine • National Institutes of Health  
Public Health Service

## GenBank® Fellowship Positions

The National Center for Biotechnology Information has three positions available for postdoctoral scientists for training and research in biological sequence database development, maintenance and analysis and in the relationship of sequences to molecular and biological structure and function. Candidates should have biological interests in areas represented in the current sequence and structure databases and successful candidates will receive training in a wide variety of computational techniques including database management systems, and information and sequence analysis tools. Applicants must have a Ph.D. or M.D. degree, or equivalent, in biology, molecular biology, genetics, molecular systematics, biochemistry or biophysics. Applicants need not necessarily be U.S. citizens. Stipends start at or above \$25,000 per year depending on experience. Applications will be accepted until April 30, 1994. Candidates should send a curriculum vitae and the names, addresses and telephone numbers of three references directly to:

**David Landsman**  
National Institutes of Health  
National Library of Medicine  
National Center for  
Biotechnology Information  
Building 38A, Room 8N-807  
9000 Rockville Pike  
Bethesda, MD 20894 U.S.A.



Selection for this position will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, sex, national origin, politics, marital status, physical or mental handicap, age, or membership or nonmembership in an employee organization.

NIH is an Equal Opportunity Employer

## THE AARON DIAMOND FOUNDATION POSTDOCTORAL RESEARCH FELLOWSHIPS *in the Biomedical and Social Sciences*

In 1994, The Aaron Diamond Foundation will support 25 postdoctoral research fellowships—to encourage excellence in research addressing the problems of **AIDS and drug abuse** and to increase the number of **biomedical and social scientists** working in **New York City** on these problems. The fellowship program is administered by the New York State Health Research Council, aided by a panel of distinguished scientists comprising the Fellowship Selection Committee.

The fellowship application is co-developed by the potential fellow and a mentor at a New York City institution. A list of over 200 established scientists interested in serving as mentors is included in the application materials, although applicants may apply with any qualified New York City scientist.

Support is provided for two years; a third fellowship year may be awarded upon subsequent application. The annual stipend is \$36,000 in the first year; the mentor's institution receives up to \$30,000 per year to cover costs associated with the fellow's research.

Preference is given to: (1) those with doctoral degrees awarded after 1987 (generally MDs must have completed their residency, while applicants with non-medical degrees may initiate the fellowship immediately after graduation); (2) applicants early in their careers, with three or fewer years of postdoctoral research experience; (3) those who are relocating to New York City; and (4) U.S. citizens or permanent residents. Women and members of minority groups are especially encouraged to apply.

**APPLICATION DEADLINE: JULY 29, 1994**

### FURTHER INFORMATION:

Margaret Brown, Ph.D., Program Director  
The Aaron Diamond Foundation Postdoctoral Research  
Fellowship Program  
5 Penn Plaza, Room 308  
New York, NY 10001  
(212) 613-2525

## ■ Immunologist ■

Assistant/Associate Professor, tenure-track position available in 9/94. Successful applicant will demonstrate commitment to high quality undergraduate and graduate teaching in immunology and cell biology and strong research credentials in cellular immunology. Candidates with research interests directed toward applied immunology are particularly encouraged to apply. PhD and postdoctoral (or equivalent professional) experience required. Send letter stating goals in research and teaching, CV, and three reference letters to **Chair, Biology Search Committee, Department of Biology, UMass-Boston, 100 Morrissey Blvd., Boston, MA 02125-3393**. Preference will be given to applications received by February 18th. An Affirmative Action, Equal Opportunity, Title IX employer. Women and minorities are especially encouraged to apply.

**University of Massachusetts  
Boston**

# RESEARCH UPDATE

## Cyanamid employs a commitment to enhancing worldwide crop and livestock production.

At American Cyanamid Company's Agricultural Research Division, we have a long-range commitment to discovering ways to increase worldwide crop and livestock production through chemical, biochemical and biological research. This is evidenced by our expanding research budget which has tripled over the last decade.

### Sr. Research Biologist/PhD

We seek a PhD to join an established program taking a mechanism of action approach to the discovery of crop protection and animal health compounds. Your work will involve the identification of molecular targets for insecticide and antiparasitic agents. These targets will be exploited in the design of screening assays to identify novel compounds which have desired selective mechanisms of action. Screens in current use include *in vitro* assays and methods based upon genetically engineered microorganisms (for example, see Current Opinion in Biotechnology 4, 543, (1993)). Active compounds will be exploited in collaboration with our medicinal chemistry, animal health and entomology groups. Your PhD in molecular biology, microbiology or genetics must be complemented by postdoctoral experience in a relevant area. Experience in receptor biochemistry or pharmacology, yeast molecular biology or *Drosophila* molecular biology is highly desirable. Pharmaceutical or agrochemical industry experience in the area of new product discovery would be a plus.

American Cyanamid Company offers an excellent compensation and benefits package and a convenient location one hour from New York City or Philadelphia. Forward your resume to: Employment Office, Dept. DK, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. An Equal Opportunity Employer.



National Institute of Allergy and  
Infectious Diseases  
National Institutes of Health

## Protein X-Ray Crystallographers

Several Postdoctoral positions are available for studies in protein crystallography. The work will focus on the structure and function of cytokines, and other molecules of relevance to immune function.

Qualified candidates should send curriculum vitae including names and addresses of three references to:

**Peter D. Sun, Ph.D.**  
**National Institutes  
of Health**

**Building 5, Room 332  
9000 Rockville Pike  
Bethesda, MD 20892  
Phone 301-402-4497  
FAX 301-496-0201**

*NIH is an Equal Opportunity Employer*

## SOIL SCIENTIST BIOLOGICAL SCIENCES CENTER DESERT RESEARCH INSTITUTE RENO, NV

Incumbent will participate in the development of soil biogeochemistry and microbial ecology programs, adding expertise in soil biology, organic chemistry and environmental microbiology. Additional research will focus on a recently funded study into the effects of elevated CO<sub>2</sub> on semi-arid ecosystems as well as the teaching of one or more courses in microbial ecology at the University of Nevada, Reno. Requires Ph.D. in soil science with strong background in soil microbiology and organic chemistry or the reverse; demonstrated ability to present and publish results; demonstrated ability to interact successfully with other scientists and experience in teaching and grantsmanship. Salary is competitive with an excellent benefits package. Position is in Reno, NV. Address telephone and written inquiries to: Dr. Dale Johnson (702-673-7379), Chairman, Search Committee or Dr. Carl Fox (702-673-7322), Director, Biological Sciences Center, Desert Research Institute, P.O. Box 60220, Reno, NV 89506. Submit letter of interest, curriculum vitae and the names, addresses and telephone numbers of three references to:

Recruitment Office  
Desert Research Institute  
University and Community  
College System of Nevada  
P.O. Box 19040  
Las Vegas, NV 89132-0040

Review of applications continues until position is filled. The Desert Research Institute is an Affirmative Action/Equal Employment Opportunity Employer.

## Established Neuroscientist

The Department of Anatomy and Neurobiology at Colorado State University plans to add a faculty member with expertise in research at the molecular level in neurobiology. Expertise may vary. Areas of current interest in the Department include: real-time methods for monitoring neurobiological processes, *in vitro* analysis of neural signalling, molecular bases of neural function, and control of developmental events. This position is available at the associate or full professor level. An established history of successful graduate and postdoctoral training, innovative approaches to contemporary neurobiological problems, as well as successful federal funding are required. Applications will be accepted until March 15, 1994. The search may be extended if a suitable candidate is not identified. Send CV and names of three references to: **Chair, Search Committee, Department of Anatomy and Neurobiology, Colorado State University, Fort Collins, CO 80523.** CSU is EEO/AA employer. E.O. Office: 314 Student Services Bldg., Fort Collins, CO 80523.

## Deputy Director UNMC/Eppler Center for Cancer Research and Care

The University of Nebraska Medical Center seeks a Deputy Directory for a cancer center with dynamic and expanding basic research and clinical programs. The candidate is to be a M.D. or M.D./Ph.D. with a strong track record in clinical research and care of cancer patients. It is desirable that the applicant have significant administrative experience and strong interpersonal skills. The Deputy Director has responsibility for facilitating interactive clinical and translational research activities of the cancer center, and working with the Director in strategic and budgetary planning, scientific program development and evaluation, space assignments, and other center-wide activities. In the absence of the Director, the Deputy Director will represent the cancer center in activities that require the Director's input or presence. The Deputy Director is to be a member of the Internal Advisory Committee and Executive Board of the cancer center. Letters of application with accompanying curriculum vitae will be received until April 15, 1994, and should be addressed to Dr. Samuel M. Cohen, Chairman, Search Committee, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-3135. The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer.



**CONSIGLIO NAZIONALE DELLE RICERCHE  
ROME, ITALY**

**Special Project**

**Advanced research for Innovations in the Agricultural System  
RAISA**

**RESEARCH FELLOWSHIPS IN  
AGRICULTURAL SCIENCES**

Raisa, a five year broad spectrum research project by the National Research Council of Italy, re-affirming the scientific interest of the former Scheme, has the pleasure to offer senior scientists from abroad the opportunity to work, for a period of 3-6 months, in any Italian Institution affiliated with the project.

RAISA activities are carried out by some hundred research teams, structured into four Subprojects:

- SP1 agricultural systems and environment;
- SP2 biotechnologies in crop production;
- SP3 biotechnologies in livestock production;
- SP4 biotechnologies in agricultural produce and by-product processing.

The main goal is to acquire the basic knowledge to foster the evolution of the natural, biological and social Agricultural System toward a more equitable farmers' income, more sustainable exploitation of resources, better fulfillment of consumers' preference and nutritional demand.

A list of research trusts and teams is available upon request.

The gross salary is from 3.0 million Lit. per month, according to the qualification, plus economy return ticket from home institution to Italy.

Applicants should present a research proposal of about 3 pages, with their application, CV, and a letter of acceptance from a RAISA host team, to: C.N.R. P.F. RAISA, Fellowship Program, Via Tiburtina 770, I 00159 Rome, Italy. Facsimile (+39 6) 4075883.

Deadline for receipt of applications is March 20th and successful candidates will be notified in April; they are expected to start their research in Italy within 1994.

**Research  
Scientist  
Cambridge, MA**

Nissan has established its new **Cambridge Basic Research** facility in **Cambridge, MA**. This facility is engaged in basic science studies of "the driving experience", especially factors that might improve driving skills and comfort as they relate to driving safety.

Problems of special interest include cognitive loads, attention and search, optical flow field assessment, navigation, early recognition of dangerous situations, and strategies for improving driver and pedestrian safety. The lab has a close working relationship with faculty at MIT and Harvard, and houses a variety of experimental facilities, including several Graphics workstations.

Temporary assignments will be for 2-3 years, renewable. Ph.D. required. Level of appointment is open. **Nissan Research & Development, Inc.** is the North American Development arm of Nissan Motor Co., Ltd. Please forward resume, representative reprints, and the names of 3 references to our Cambridge Basic Research laboratory by 1 March 1994:

**Nissan Cambridge Basic Research, 4 Cambridge Center, Cambridge, MA 02142.** Equal Opportunity Employer.



**NATURAL PRODUCTS  
SCREENING**

AMRAD Corporation Ltd., Australia's leading R&D-based pharmaceutical company was established in 1987 to provide a vehicle for the development of Australian biomedical research. During its short life, AMRAD has developed an outstanding portfolio of research projects, established several major international alliances and set up a pharmaceutical marketing subsidiary of considerable impact.

As part of its mission to develop and support pharmaceutical discovery activities arising from Australian research, AMRAD is establishing a facility, in Brisbane, to screen and discover novel therapeutics from natural products such as indigenous plants, terrestrial and marine micro- and macro-organisms. This facility will be fully operational by September 1994. AMRAD is now seeking a number of personnel to fill key positions at this new **Natural Products Screening Facility**.

Successful candidates will form part of a multi-disciplinary team working in diverse areas of natural products drug discovery including microbiology, virology, cell biology, pharmacology and chemistry. Applicants should have a developed expertise in the area of the position for which they are applying, however multi-skilling and adaptability will be an advantage in a goal-oriented team.

Key personnel will undergo a period of training at Panlabs Inc., Seattle USA, from which AMRAD is acquiring technologies associated with high-throughput natural products screening.

**Director**

The successful candidate will be responsible for all aspects of the establishment, management and operations of the Facility. It is envisaged the candidate will possess an international reputation for contributions to medical/drug discoveries in addition to industrial and/or natural product experience and demonstrated managerial experience. This position will report to AMRAD's Research Director.

**Principle Research Scientist -  
Screening**

Responsible for the overall implementation and coordination of the Facility's activities, candidates should have considerable experience in developing and implementing high through-put assays for drug discovery and/or natural product screening.

**Research Scientist -  
Microbiology**

Responsible for the Facility's microbiological and fermentation processes, candidates should possess experience in devising and implementing isolation methodologies for organisms from a variety of sources.

**Research Scientist - Cell Biology**

Responsible for the development and validation of molecular and cell-based assays candidates should have extensive experience and knowledge of molecular biological techniques.

**Research Scientist -  
Natural Products Chemistry**

Responsible for all chemistry aspects of the Facility, candidates should have a substantial experience with separation, crystallisation techniques and spectroscopic assignment of complex organic molecules.

For a confidential discussion, please call **Dr Amanda Reid** on (613) 654 8034 or write/fax (613) 654 1481 your details.

**Daryl Alexander & Associates**  
The Block Arcade,  
282 Collins Street, Melbourne,  
Victoria 3000 Australia



## POSITIONS OPEN

**POSTDOCTORAL POSITIONS.** Available July 1, 1994. Multidisciplinary research group offering research training opportunities in several areas including: Regulation of the renin-angiotensin system, eicosanoids and epithelial ion transport, molecular genetics of ion channel diseases, tyrosine kinases in endothelial differentiation, and the molecular biology of prostaglandin receptors. Candidates should have M.D. or Ph.D., and be eligible for NIH training grant support. Applicants should send curriculum vitae and names/addresses of three references to: **Postdoctoral Search Committee, c/o Dr. A. L. George, S-3223 MCN Vanderbilt University Medical Center, Nashville, TN 37232-2372. Women and minorities are encouraged to apply. Vanderbilt University is an Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available to study molecular mechanisms underlying circadian rhythms in *Drosophila*. Ongoing research focuses on the genetic and molecular characterization of genes involved in the regulation of circadian rhythms. Please send curriculum vitae and names of three references to: **Dr. Amita Sehgal, Department of Neuroscience, 233 Stemmler Hall, University of Pennsylvania Medical Center, Philadelphia, PA 19104.**

**POSTDOCTORAL FELLOW POSITIONS** available immediately for research on the cell and molecular biology of epithelial growth regulation and differentiation. One project is aimed at identifying polypeptide mitogens, extracellular matrix molecules, and receptors whose functions are rate-limiting either to epidermal wound repair or to stem cell survival, and requires a Ph.D. with strong background in biochemistry, receptor biology, and epithelial cell culture. The other project is aimed at identifying cell-type specific transcriptional regulators and autocrine loops that play central roles in mesothelial cell histogenesis and neoplasia, and requires a Ph.D. with strong background in molecular biology, somatic cell genetics, and mammalian cell culture. Salaries will be similar to current NIH training grant stipend levels. Interested individuals should send a cover letter, curriculum vitae, reprints of relevant publications, names of three references to: **Dr. James G. Rheinwald, Division of Dermatology, Department of Medicine, Throm 805, Brigham & Women's Hospital, 75 Francis Street, Boston, MA 02115.**



### Brown University POSTDOCTORAL FELLOWSHIPS IN ENVIRONMENTAL PATHOLOGY

Postdoctoral research fellowships are available in an interdisciplinary Training Program in Environmental Pathology for predoctoral, postdoctoral, and medical students at Brown University. Research training will be provided in basic mechanisms of disease related to environmental exposures that result in cell injury, immune dysfunction, and cancer. A Ph.D. in cell biology, biochemistry, molecular biology, immunology, or toxicology is required. Additional training in experimental pathology will be provided. *This program is funded by the National Institute of Environmental Health Sciences for U.S. citizens or permanent residents.* Applicants should send curriculum vitae, graduate transcript, three letters of recommendation, and statement of research goals to: **Agnes B. Kane, M.D., Ph.D., Program Director, Department of Pathology and Laboratory Medicine, Brown University, Providence, RI 02912. FAX: (401) 863-1971. Brown University is an Equal Employment Opportunity/Affirmative Action Employer.**

### M.J. BRODY FELLOWSHIP IN BASIC CARDIOVASCULAR RESEARCH

This fellowship provides \$7,500 per year to enhance existing base support of fellows in basic cardiovascular pharmacology and physiology. The intent is to bring highly promising investigators from the United States and abroad to the University of Iowa for additional research training. Eligible individuals must be in the developmental stage of their careers and have attained a doctoral degree. A proposal is required, details about which can be obtained from the address below.

Proposals will be accepted at any time, but should be received before April 1, 1994, for starting on or after July 1, 1994. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

**G.F. Gebhart, 2-372 Bowen Science Building, Department of Pharmacology, The University of Iowa College of Medicine, Iowa City, IA 52242-1109.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to evaluate the food resource base and habitat quality of endangered species of insectivorous vertebrates. Ph.D. in Entomology, Ecology, or Biology. A strong background in insect community ecology including sampling and identification of insects in natural communities is preferred. Send or FAX curriculum vitae including 3 references to: **Dr. Rick Redak, Department of Entomology, University of California, Riverside, CA 91030. Telephone: 909-787-7250; FAX: 909-787-3086; E-mail: REDAK@UCRAC1.UCR.EDU. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### SCIENTIST— RUSH CANCER INSTITUTE

The Rush Cancer Institute currently has available a **SENIOR POSTDOCTORAL POSITION** for a two-year study on molecular biology of human hemopoiesis. The study would involve preparation of recombinant vectors and extensive manipulation of human genes to stably transfect various bone marrow cells. Experience in molecular biology is essential. Salary commensurate with experience. Direct curriculum vitae and three letters of references to: **Pamela Mims, 729 South Paulina Street, Chicago, IL 60612. Equal Opportunity Employer.**

### RUSH— PRESBYTERIAN— ST. LUKE'S MEDICAL CENTER

### POSTDOCTORAL/RESEARCH ASSOCIATES IN THEORETICAL/COMPUTATIONAL CHEMISTRY/PHYSICS AND EXPERIMENTAL CHEMICAL PHYSICS

Theoretical and experimental quantum control of chemical dynamics. Ultrafast, short wavelength electron and X-ray diffraction as applied to imaging molecular quantum dynamics. Close interaction between experiments, analytic theory and calculations. Looking for exceptionally able (1) theoretical/computational chemists or physicists with strong background in quantum or classical dynamics, quantum control of chemical dynamics or related areas; (2) experimentalists, particularly those with strong background from among molecular beams, charged particle beams, or accelerator physics. **Prof. Kent R. Wilson, Department of Chemistry 0339, University of California, San Diego, La Jolla, CA 92093-0339. Affirmative Action/Equal Opportunity Employer.**

### Samsung Biomedical Research Institute RESEARCH STAFF AND POSTDOCTORAL POSITIONS

The Samsung Biomedical Research Institute, a non-profit organization consisting of the center for Basic Biomedical Science, Clinical Science, Biomedical Engineering and Pharmacology, will be opened in October 1994, in Seoul, Korea. The center for Biomedical Science, devoted to research in molecular biology and immunology, is seeking individuals with Ph.D. and/or M.D. degree, significant postdoctoral experience and excellent research accomplishments for staff positions. Staff members are expected to develop a high-quality independent research program. Research fund will be provided by the Institute. Also open are postdoctoral fellowship positions. A strong background in molecular biology, biochemistry and/or immunology is highly desirable. Submit two copies of curriculum vitae and publication lists to:

**Prof. Hyun S. Shin  
20 Gunpowder Road  
Glen Arm, MD 21057, USA**

For additional information, contact: **Dr. Hyun S. Shin at 410-955-3208 (Telephone), 410-955-4686 (FAX).**

**RESEARCH ASSOCIATE**—University of Maryland at College Park. Laboratory for Global Remote Sensing Studies. Ph.D. in environmental sciences and/or information extraction from remotely sensed data required. UNIX experience advantageous. Projects relate to characterizing global land cover from satellite data. Send résumé to: **Ruth DeFries, Department of Geography, University of Maryland, College Park, MD 20742. UMCP is an Equal Employment Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### ECOLOGICAL TOXICOLOGIST

The U.S. Environmental Protection Agency—Region 8 in Denver, Colorado, is presently looking for a highly qualified toxicologist with specific training in the area of terrestrial and avian ecology to serve as an advisor and technical group coordinator within the Superfund Program. An advanced degree (Ph.D. or D.V.M.), advanced training in toxicology, a working knowledge of EPA risk assessment guidance and/or considerable experience related to ecotoxicology are desirable.

The position will be filled at the GS 12/13 level; salary range \$42,128 to \$65,121 per annum depending on qualifications. *Candidate must be U.S. citizen. An Equal Opportunity Employer.* Inquiries and requests for the position description or government applications (SF-171 forms) should be directed to: **Valerie Taylor, 999 18th Street, Suite 500, Denver, CO 80202. Telephone: (303) 293-1499. Correctly completed applications will be accepted until March 1, 1994.**



**Agricultural  
Research  
Service** **United States  
Department of  
Agriculture**

### U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

**RESEARCH MOLECULAR BIOLOGIST**, Insect and Weed Control Research, West Lafayette, Indiana. Responsible for establishing and directing basic research program to identify genes and factors conveying resistance and to characterize the nature and basic mechanisms of insect resistance in small grain crops. The wheat-Hessian fly interaction is a priority area for investigation. Incumbent uses molecular techniques to identify and characterize resistant genes in plant host and insect, and is a member of a research team leading to the protection of small grains from insects. Degree in the biological sciences or appropriate related disciplines, knowledge of plant genetics and biochemistry, and skill in plant and insect molecular biology techniques are required. Ph.D. desirable. Salary range \$49,041 to \$58,377, based on qualifications. For further information contact: **Dr. M. Schreiber, 317-494-4656.** For application procedures contact: **B. Webert, 301-344-1921.** Refer to #4N017 when inquiring. Completed applications must be postmarked by March 1, 1994. *USDA-ARS is an Equal Opportunity Employer.*

### BOTANIST

Full-time, grant-supported. Primary responsibilities are to search for endangered and threatened plants and describe the natural character of the vegetation on proposed highway construction sites. The candidate is also expected to pursue independent research. Applicants must have an advanced degree with specialty in plant ecology or systematics. Ph.D. is strongly preferred. The candidate must have strong knowledge of the midwestern flora with emphasis on Illinois' endangered and threatened species. To ensure full consideration, send letter of application, curriculum vitae, names of three references, and reprints of three representative publications by 28 February 1994 to: **Jacqueline Sanders, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820; Telephone: (217) 244-7790. FAX: (217) 333-4949. INHS is an Equal Opportunity/Americans With Disabilities Act Employer.**

## ANNOUNCEMENTS

### POSSIBLE GENETIC EFFECTS OF PORTABLE CELLULAR TELEPHONE EXPOSURES

Proposals are being sought from qualified scientists and laboratories for *in vivo* and *in vitro* studies examining possible genetic effects from exposures typical of portable cellular telephones.

For further information please write to:

**Dr. George Carlo  
Chairman, Scientific Advisory Group  
on Cellular Telephone Research  
1711 N Street, N.W.  
Suite 200  
Washington, DC 20036**

## THE UNIVERSITY OF MELBOURNE, AUSTRALIA CHAIR OF AGRICULTURE AND DEAN

Applications are invited for appointment to the position of Professor of Agriculture and Dean. The successful applicant will be appointed Dean for an initial period of five years.

Discussions are in progress between the Victorian College of Agriculture and Horticulture Ltd. (VCAH) and the University about the creation of a combined Faculty for the conduct of agricultural and related education. The VCAH affiliated with the University on 1 July 1992, but retains operational autonomy through VCAH Ltd.

The University is seeking an outstanding leader in the field of agriculture or related education to provide strategic direction for agriculture, forestry and horticulture. The appointee will have wide recognition in the field, extensive research and teaching experience in agriculture or a related field, highly developed skills in the management of agriculture and in human resources, and an ability to promote the linkage of academic activities to the needs of industry.

An essential feature of the appointee will be a commitment to agricultural education at all levels, and to the development of appropriate linkages between them. The Dean will also play a prominent part in the leadership and development of agriculture and related policy in Victoria and nationally.

The salary of a Professor is AUD77,900 per annum. Appointment as Dean will attract a responsibility loading of AUD9,699, a fully maintained motor vehicle, and a special loading to be negotiated.

Further information about the position, including details of application procedure, conditions for outside work, superannuation, travel and removal expenses, housing assistance and conditions of appointment, is available from the Registrar. All correspondence (marked "PERSONAL AND CONFIDENTIAL") should be addressed to the Registrar, The University of Melbourne, Parkville, Victoria, 3052, Australia. Telephone: +61 3 344-7529 (Ms. K. Goldenberg). Facsimile: +61 3 344-6897

Enquiries regarding proposed academic arrangements for agriculture and related education should be directed to Professor C.B. Schedvin, Deputy Vice-Chancellor (Academic). Telephone: +61 3 344-6140. Facsimile: +61 3 347-5904.

Applications close on 30 April 1994.

The Council reserves the right to make no appointment or to fill the position by invitation at any state.

The University of Melbourne is an equal opportunity employer and has implemented a smoke-free workplace policy.

## INTEGRATED ASSESSMENT OF EFFECTS OF CLIMATE

**CHANGE AND UV-B ON RICE-** The United States Environmental Protection Agency, Environmental Research Laboratory at Corvallis (ERL-C), Oregon, requests assistance **APPLICATIONS** to advance scientific knowledge which would develop and test methodologies for an integrated risk assessment of the effects of UV-B and climate change on the irrigated rice ecosystem, bringing together data from ERL-C funded and other applicable research. ERL-C and its cooperators have conducted extensive research in the U.S., the Philippines, and other sites in Asia to determine the impacts of UV-B and climate change on the irrigated rice ecosystem. Available data (both in computer and report formats) include results from experiments and modeling activities. The application should: (1) outline a conceptual approach to ecological risk assessment of UV-B and climate change and demonstrate its application to the irrigated rice ecosystem, (2) describe how the approach will be tested and the tools to be used (e.g., experimental data, models, spatial and temporal geographic analysis), (3) describe the predicted endpoints of the assessment (e.g., rice yield, interactions among other organisms in the rice ecosystem such as, weeds, insects, diseases and rice; methane emissions from rice fields; and socioeconomic impacts of change in rice agroecosystems), (4) describe collaboration with ERL-C and its cooperators to use available rice ecosystem data sets, and (5) describe the procedures for evaluating the test of the assessment methodology. Research must be collaborative in nature with the EPA's ERL-C and within the broad limits of EPA interests. *Statutory authority for EPA funding of the specified research is authorized in the Clean Air Act, Section 103. Interested applicants must be eligible to receive Federal Assistance under the Code of Federal Regulations (CFR) Part 30-General Regulation for Assistance Programs and Part 40-Research and Demonstration. Only state and local governments, nonprofit institutions of higher education, individuals, or nonprofit research organizations eligible to receive federal assistance under these acts should submit applications.* Send requests for application materials and additional information to: **Dr. David M. Olszyk, U.S. Environmental Protection Agency, Environmental Research Laboratory-Corvallis, 200 SW 35th St., Corvallis, OR 97333, (503/754-4397), daveo@heart.cor.epa.gov.** Completed applications will be due **by C.O.B. March 25, 1994.**

## UNIVERSITY OF ZUERICH Department of Rheumatology, University Hospital

### RESEARCH ASSOCIATE (LEADING POSITION) FOR EXPERIMENTAL RESEARCH

Applications are invited from MD's with a strong background in immunological and microbiological research. Candidates should bring innovative ideas of experimental research in rheumatology and be able to lead a well-established research group. They are the links between experimental and clinical research. Applicants with the grade of "Privatdozent" or with a scientific work, which enables them to ask for habilitation after a short time, will be favored. The above "leading position" can later be changed in a permanent leading position (Leitender Arzt) with adequate financing and - possibly - in a faculty position. Applications, including a curriculum vitae, list of publications, and the names of two referees should be sent until March 31st, 1994, to Prof. B.A. Michel (Director) or to Prof. K. Fehr, Department of Rheumatology, University Hospital, Gloriastr. 25, CH-8091 Zürich, Switzerland, Fax (1) 255 44 44.

## FACULTY POSITIONS IN MOLECULAR VISUAL SCIENCES HARVARD MEDICAL SCHOOL MASSACHUSETTS EYE AND EAR INFIRMARY

We invite applications for new faculty appointments in the field of molecular and physiological biology of vision. Two or three positions will be filled at the rank of Assistant or Associate Professor. Candidates are sought with strong backgrounds in biochemistry, cell biology, development, genetics, or physiology who will develop research programs addressing functions of the retina, pigment epithelia, and associated ocular or CNS tissues. Our objective is to form a group with excellence in basic disciplines whose interests include, or will develop towards, the pursuit of problems addressing errors in mammalian visual function.

Please forward material by March 15, 1994. Applicants should forward their curriculum vitae, summary of research interests, reprints, and arrange for three letters of recommendation to be sent to:

Ms. Lois Toutwid  
Harvard Medical School  
Department of Ophthalmology  
243 Charles Street  
Boston, MA 02114

Harvard Medical School and Massachusetts Eye & Ear Infirmary are Affirmative Action/Equal Opportunity Employers, M/F/D/V.

## Group Supervisor Adenovirus Production

Genetic Therapy, Inc., a leading biotechnology company, is developing viral-mediated gene transfer methods applicable to human gene therapy. The Tissue Culture Core Laboratory is seeking a scientist to lead a group responsible for adenovirus production.

Candidates should possess an MS or Ph.D. and have a strong background in adenovirus or other human virus vaccine production. Preference will be given to candidates familiar with GMP compliance.

GTI offers a stimulating and challenging environment, with competitive salaries and benefits. Please send a resume, along with the names and addresses of two references to:



**Genetic Therapy, Inc.**  
Human Resources -  
TCC/SUP-3  
19 Firstfield Road  
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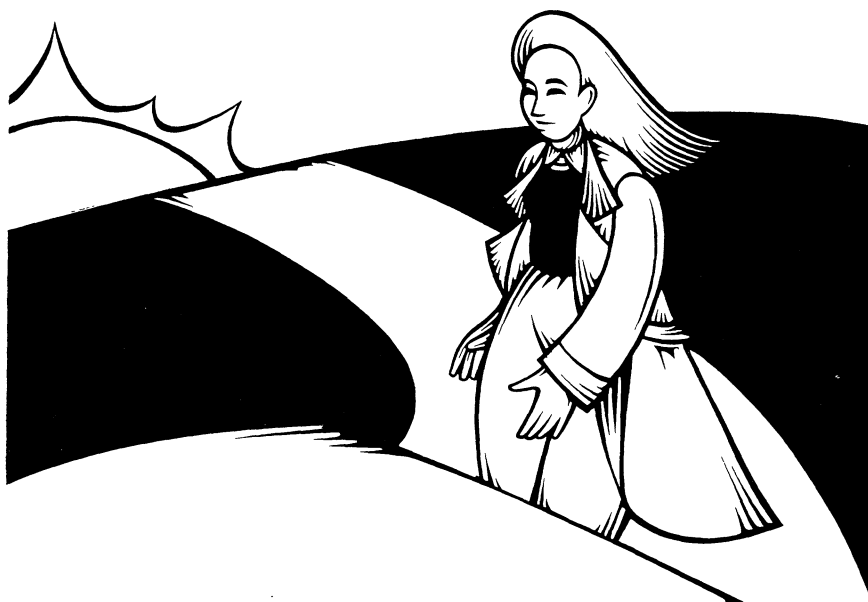
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*Issue Date:*

*March 11, 1994*

**Advertising  
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February 22, 1994.**

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## NHLBI Tenure-Track Positions

The Molecular Hematology Branch, NHLBI, NIH is seeking two tenure-track Molecular and Cellular Biologists to develop independent research programs that complement ongoing research on the integration and expression of transgenes in mammalian cells.

One program would develop novel viral or non-viral gene transfer systems for the targeted delivery or modification of genes.

A second program would examine the mechanisms by which transcription factor activities are regulated in both normal and genetically altered cells.

Candidates should have an M.D. and/or Ph.D. with a minimum of 3-4 years postdoctoral experience and a strong background in Molecular Biology, Virology and Biochemistry. Demonstrated leadership ability and skills to supervise an independent research program are essential. A successful candidate would be supported by up to 4 Postdoctoral Fellows and Technicians for a period of up to 6 years. During this time the individual would be evaluated for tenure within the Molecular Hematology Branch, NHLBI. A very highly qualified candidate could be tenured in significantly less than 6 years of successful research. The salary range is from \$40,000 to \$60,000 depending on experience and training.

Please submit a curriculum vitae, three letters of recommendation, and a 2 page statement of your research interests, goals, and the approaches you would take to achieve them.

NIH is an Equal Opportunity Employer and applications by women and minorities are strongly encouraged. Please address correspondence to:

**Brian Safer, M.D., Ph.D.**  
Molecular Hematology Branch  
National Heart, Lung,  
and Blood Institute  
Building 10, Room 7D18  
9000 Rockville Pike  
Bethesda, MD 20892



**Novo  
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## Scientist: Protein Chemistry/Enzymology

Novo Nordisk Bioindustry Ltd. was established in 1977 as a subsidiary of Novo Nordisk A/S, a major international Danish industrial biotechnology and pharmaceutical company. Novo Nordisk Bioindustry Ltd., located in Makuhari between Tokyo and Narita International Airport, Japan, is focusing on R&D, application technology and marketing of industrial enzymes.

The R&D group is identifying and developing microbial enzymes for industrial use. Apart from enzyme purification and characterization, the main disciplines are screening, fermentation and strain improvement by classical mutagenesis and transformation methods.

The company has an immediate opening for an experienced scientist to join its R&D group. The appropriate candidate must have a Ph.D. in biochemistry or similar discipline with several years of research experience.

The candidate must have a strong knowledge of protein chemistry and/or enzymology. Prior experience with protein purification, characterization and/or enzyme kinetics is essential. The work will include purification to single band of minor enzyme components of crude culture broths.

The candidate must be a team player and have a good sense of cross-disciplinary and result-oriented research. Good knowledge of Japanese is an advantage.

If you are interested in a challenging position in an internationally-oriented company and meet the above criteria, please send your curriculum vitae with a list of references for consideration, in confidence, to: **Novo Nordisk Bioindustry, Ltd., R&D Department, Makuhari Techno Garden CB-6, 3, Nakase 1-chome, Mihama-ku, Chiba-shi 261-01, Japan.** We are an Equal Opportunity Employer.

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## Postdoctoral & Senior Research Associateship awards

*in the areas of*

## Toxinology & Molecular Virology

*at the*

## U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES (USAMRIID), Frederick, MD

The National Research Council (NRC) is accepting applications for Research Associateship awards at USAMRIID. Research opportunities include:

### **Study of staphylococcal enterotoxins and/or snake venom, postsynaptic neurotoxins:**

Opportunity to study these proteins as potential vaccine candidates. Employ various *in vitro* and *in vivo* techniques, such as epitope mapping with monoclonal antibodies, receptor binding assays, and use of site-directed mutants. Experience in protein biochemistry and immunology necessary; knowledge of molecular biology helpful.

**Contact:** Dr. Brad Stiles, Toxinology Division.  
TEL: 301/619-7181 or 7211 • FAX: 301/619-2348

### **Design and evaluation of viral vaccines:**

Opportunity to pursue molecular approaches to evaluate viral gene function, mechanisms of virus attenuation, nonreplicating particle vaccines, eukaryotic expression vectors, and RNA replication for hantaviruses, flaviviruses and alphaviruses. Includes the use of eukaryotic and prokaryotic expression systems to study the role of individual proteins in infection and immunity and the effects of attenuating changes on viral gene function. Experience in animal virology and molecular biology preferred.

**Contacts:** Dr. Connie S. Schmaljohn, TEL: 301/698-7478  
Dr. Erik A. Henchal, TEL: 301/698-7463 or  
Dr. Kevin Anderson, TEL: 301/698-7462  
Virology Division, FAX: 301/619-2439 or 4625

Each NRC awardee will work in one of the above project areas as a guest investigator at USAMRIID. Stipends begin at \$32,400 per annum and are appropriately higher for applicants with more than 5 years experience. Requirements: Ph. D. or equivalent; U.S. citizenship preferred. Awards are for one year renewable to a maximum of three.

FOR FURTHER INFORMATION ON RESEARCH OPPORTUNITIES, CONTACT INDIVIDUALS LISTED ABOVE.

\*\*\*\*\*

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

FOR APPLICATION MATERIALS CONTACT:

**The National Research Council**  
**The Associateship Programs (TJ-2094/RD)**  
2101 Constitution Avenue  
Washington, DC 20418  
FAX: (202) 334-2759



## ASSISTANT PROFESSOR GROSS ANATOMY

Applications are being accepted for a tenure-track gross anatomy position at the assistant professor level in the Department of Anatomy, College of Medicine, University of South Florida, Tampa, Florida. Earliest starting date for this position is July 1, 1994.

Individuals should have a proven record of research and publication, with a demonstrated ability or a potential to attract extramural funding. Candidates are required to hold a Ph.D. in anatomy or cell biology, or a combination of Ph.D./M.D. Postdoctoral experience and prior teaching in a medical school gross anatomy course are mandatory requirements. Preference will be given applicants with research interest and experience in cell and molecular biology applied to areas of neuroscience, reproductive or cardiovascular systems. Teaching responsibility involves participation in a one-term dissection-based gross anatomy course for medical students and graduate level courses related to their specialty.

The College of Medicine, University of South Florida, is a 23-year old medical school with a class of 96 Freshman students. The medical curriculum is traditional, but changes to a more contemporary curriculum are contemplated within the next couple of years.

Applicants should forward curriculum vitae, statement of research interests, and names of three references by May 1, 1994 to:

Don R. Hilbelink, Ph.D.  
Chairman of Search Committee  
Department of Anatomy, College of Medicine  
University of South Florida  
12901 Bruce B. Downs Boulevard, MDC Box 6  
Tampa, Florida 33612-4799

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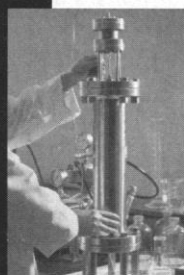
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We offer attractive compensation and generous benefits. Resumes, including salary history, should be forwarded in confidence to: **Miles, Inc., Pharmaceutical Division, Dept. ELLS, 400 Morgan Lane, West Haven, CT 06516.**

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**A POSTDOCTORAL POSITION in IMMUNOLOGY** is available for a person with training in cellular and/or molecular immunology to study basic immunology and the immune response to opportunistic infections, including tuberculosis. Future appointment to staff is possible depending on performance.

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Applications consisting of a curriculum vitae, the names and addresses of three references should be addressed to:

Robert J. North, Ph.D., D.Sc.  
Director  
Trudeau Institute, Inc.  
P.O. Box 59  
Saranac Lake, NY 12983

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Our team employs the very latest in computer assisted drug design technology by using our proprietary technology MultiCASE. We are looking for a Director of Pharmacology who will work closely with our computational and synthetic chemists to identify new chemical entities. A strong knowledge of the existing literature as well as experience in inflammation is an asset.

If you are goal oriented, feel you can make a difference, and would like to be rewarded for your efforts, Biofor is for you. We are a success-oriented company focusing on rational computer-aided drug design and would welcome your experience to our team. We offer a competitive salary with the opportunity for substantial growth. We are located in the beautiful Pocono mountains. Please send resume to:

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## Materials Microscopy Position

Monsanto Corporate Research has an opportunity for a Materials Scientist with a background in microscopy. The position is located in the Analytical Sciences Center (ASC) within Monsanto's Corporate Research. The ASC is an exciting, state-of-the-art, research organization consisting of 26 Ph.D. and 35 technical staff members serving the analytical needs of Monsanto Corporate Research, The Chemical Group, the Agricultural Group, G.D. Searle, and Nutrasweet.

The successful candidate will be hired to head a small team involved in the structural examination of catalysts, polymers, or other materials. The position requires a Ph.D. or equivalent in materials science or a related field with 2-5 years' post-doctoral experience in microscopy. Previous experience demonstrating the ability to effectively support research, development and manufacturing groups, initiate independent research projects, and supervise others is highly desirable.

Monsanto offers a competitive salary and benefits package, a challenging and outstanding career opportunity in a fast-paced scientific organization. Interested applicants should send their CV, with the names and addresses of three references, and copies of recent publications to: **Ms. Denise Cooper; RLD-1; Monsanto Company; 800 N. Lindbergh Blvd.; O2H; St. Louis, MO 63167.** Monsanto is an Equal Opportunity Employer M/F/D/V.

# Monsanto

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**PENN**  
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## MOLECULAR NEUROSCIENCE

The Department of Neuroscience at the University of Pennsylvania School of Medicine seeks a molecular neuroscientist to fill a tenure-track position at the assistant professor level. Although no specific area is favored, the position would be ideal for an individual applying modern molecular biological or biophysical techniques to problems of neuronal structure and function, or to the pathogenesis of neurological disease. Applicants should submit letter describing their research interests, CVs and three letters of recommendation to: **Molecular Neuroscience Search Committee, Department of Neuroscience, 218 Stemmler Hall, University of Pennsylvania School of Medicine, Philadelphia, PA 19104.** Closing date for receipt of applications is April 15, 1994; Penn is an AA/EOE. Women and Minorities are encouraged to apply.

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**General and Cell Biologist.** Instructional responsibilities may include lectures and laboratories in Introductory Biology for non-science majors, Nursing/Physical Education majors and Biology majors. Development of a Cell Biology course and Biology major advising is expected of the successful candidate. Qualifications include a Ph.D. in Biology, current knowledge and substantial background in General and Cell Biology as well as two years of successful experience teaching college level biology lectures and laboratories and a clear commitment to undergraduate teaching.

**General and Microbiologist.** Responsibilities may include lectures and laboratories and Microbiology for Nursing majors, Introductory Biology for Nursing and non-Biology majors and Anatomy and Physiology as well as advising Biology majors. Qualifications include a Ph.D. in Biology, current knowledge and substantial background in General Biology, Microbiology and other Allied Health support areas, two years of successful experience teaching College level Biology lectures and laboratories and a clear commitment to undergraduate teaching. Additional experience in supervision of undergraduate research or internships is desirable.

**Application review will begin immediately and continue until the positions are filled.**

**To apply, send letter of application specifying department and position for which you are applying, resume, appropriate transcripts and three letters of reference to: Office of Affirmative Action, Salem State College, 352 Lafayette St., Salem, MA 01970.**

**If applying for more than one position, a separate package must be submitted for each. Single applications for more than one position will not be considered. SALEM STATE COLLEGE IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER. PERSONS OF COLOR, WOMEN AND PERSONS WITH DISABILITIES ARE STRONGLY URGED TO APPLY.**

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- April 24-28, Experimental Biology (FASEB), Anaheim, California

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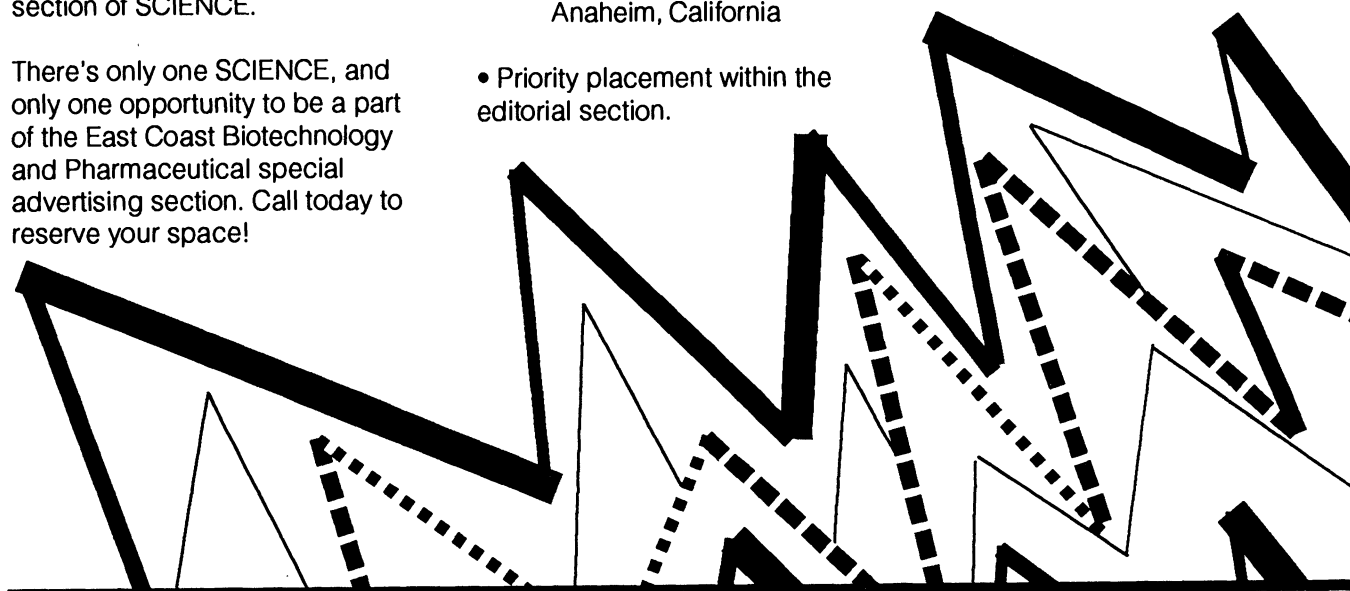
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**Advertising Space  
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**SCIENCE**  
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NYU  
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## Assistant Research Scientist

NYU Medical Center currently has a postdoctoral position available in the laboratory of Dr. James Borowiec to conduct molecular studies into the mechanism and regulation of eukaryotic DNA replication. The preferred candidate will have a strong background in biochemistry with experience in the examination of protein-nucleic acid interactions.

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### Scientists

As a scientist in our Gene Discovery Group you will participate in the identification of human and viral genes responsible for the development, predisposition and progression of different disease phenotypes, drug resistance, resistance to viruses, cellular differentiation, etc. We are looking for individuals with abilities and interests in the following areas: Retroviral vectors, HIV, hepatitis and herpes viruses, multidrug resistance, hematopoiesis, oncogenes and tumor suppressors. Ph.D., 2+ years of relevant experience. FSL-1.

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We are looking for individuals with expertise in molecular and cellular biology. Knowledge of molecular/cellular virology (HIV, HBV, HCV, HSV), FACS analysis, construction and screening of cDNA libraries, mammalian transfection and related methods is essential. FPD-1.

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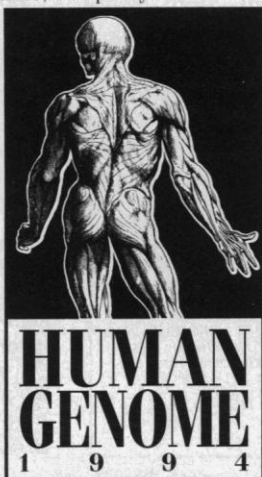
OCTOBER 2-5, 1994 WASHINGTON, D.C.

Mark your calendar now! For the fifth year, Science magazine and The Human Genome Organisation (HUGO) are pleased to sponsor the most comprehensive update on the genome project. The meeting will span issues in mapping, development, signal transduction, genome analysis, medical ethics, and policy.

The genome project is having a revolutionary effect on medical diagnosis, biotechnology, and investigations in cell and molecular biology.

- What are the newest advances in technology?
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For answers to these questions and a complete update on the genome project, don't miss this meeting! Call (703) 671-1400 or fax (703) 671-7695 today for more info.



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### Infectious Diseases Immunologist

A vacancy exists at the assistant or associate professor level for an immunologist interested in employing modern immunological techniques to analyze immunity to infections with microbial pathogens. The successful applicant will be supplied the resources to develop his/her independent research program within the overall infectious disease program of the Trudeau Institute. Persons interested in developing models of immunity to intracellular pathogens are encouraged to apply.

**THE TRUDEAU INSTITUTE** is a well-endowed, not-for-profit, basic research institute with modern facilities, up-to-date equipment, in-house animal production, efficient management and an international reputation for excellence. The Trudeau Institute is located on the shore of Saranac Lake, 8 miles from Lake Placid. Competitive salary and fringe benefits are offered and institute housing will be made available.

Applications consisting of a curriculum vitae, the names and addresses of three references, and a brief description of research interests, should be addressed to:

Robert J. North, Ph.D., D.Sc.  
Director  
Trudeau Institute, Inc.  
P.O. Box 59  
Saranac Lake, NY 12983



## ANNOUNCEMENTS

### BRAIN IMAGING SCHOLARSHIPS

The Department of Biomedical Engineering at the University of Alabama at Birmingham announces a Ph.D. and M.D./Ph.D. program specialized in the area of functional and structural imaging of the brain, and funded by the Whitaker Foundation. Applicants will receive formal training in the physics and engineering aspects of medical imaging, and in neurobiology and aspects of clinical diagnostic imaging. Stipend amounts are \$15,000 per year, plus paid tuition and a travel and materials allowance. This program will be small, very focused, and will seek applications from highly motivated individuals having excellent GRE and GPA scores, and a B.S. or M.S. degree in biomedical or electrical engineering, physics, computer science, or a related area. Applications are encouraged from persons with the M.D. and appropriate undergraduate degrees. For more information contact: Dr. Ernest Stokely (stokely@atax.eng.uab.edu), Biomedical Engineering Department, UAB, BEC 256, Birmingham, AL 35294-4461. UAB is an Equal Opportunity Employer, and encourages applications from women and minorities.

## COURSES AND TRAINING

### NEW ENGLAND BIOLABS MOLECULAR BIOLOGY AND BIOTECHNOLOGY SUMMER WORKSHOPS.

We are pleased to announce the ninth annual summer workshops held at the Clark Science Center, Smith College, Northampton, Massachusetts. This intensive two-week course emphasizes hands-on molecular biology. No previous experience is required. The fee is \$2,700 and includes room and board. Three sessions will be offered; June 5-18, June 26-July 9, and July 17-30, 1994. For further information, see our full-page ad which will appear in the February 4, 1994, issue of Science, or call (413) 584-3643.

### GRADUATE TRAINING IN VIRAL ONCOLOGY AND IMMUNOLOGY

Stipends are available for students pursuing a Ph.D. in molecular oncology or immunology beginning September 1994. The principal interests of participating faculty are viral and cellular oncogenes, growth control, and molecular, cellular, and tumor immunology.

Students will be supported chiefly by an NIH programmatic training grant, requiring U.S. citizenship or resident status. We strongly encourage applications from minority students. Funding is also available outside of this source. Information and applications forms are available from: Dr. R.B. Carroll, Graduate Student Advisor, Department of Pathology, New York University Medical School, 550 First Avenue, New York, NY 10016.

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## MEETINGS

### ACHEM S MINORITY TRAVEL FELLOWSHIP PROGRAM

The Association for Chemoreception Sciences (ACHEM S) is pleased to announce the availability of travel fellowships, funded by the NIDCD, for graduate students and scientists interested in the chemical senses to attend the annual meeting of AChem S in Sarasota, Florida, April 13-17, 1994. Members of African-American, Hispanic-American, Native American, Pacific Islander, or other ethnic or racial groups underrepresented in chemosensory research will be considered. Applicants need not be members of AChem S, but must be U.S. residents. Applicants should submit a brief statement of their research interests, curriculum vitae, two letters of recommendation and indicate the minority group with which they identify. Materials should be sent to: Travel Fellowship Committee, AChem S Business Office, 220 Westridge Drive, Tallahassee, FL 32304. Awardees will be notified in writing by March 1, 1994.

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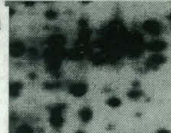
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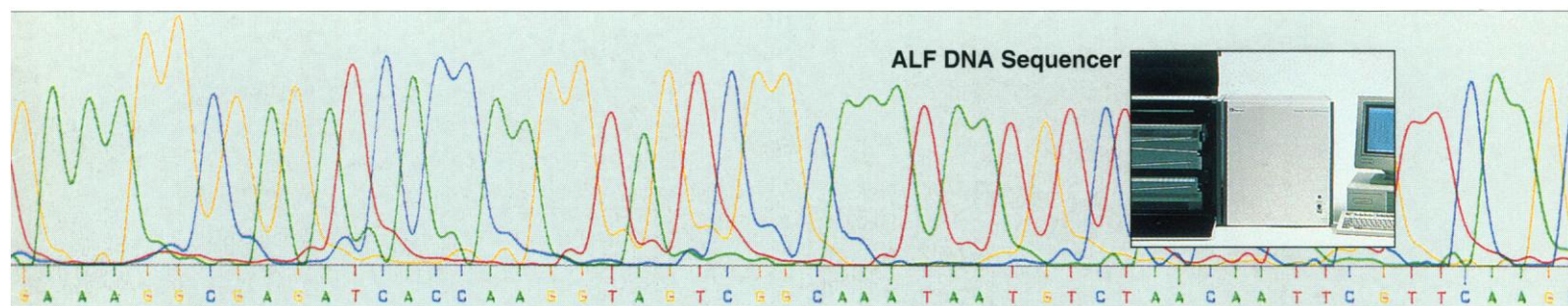
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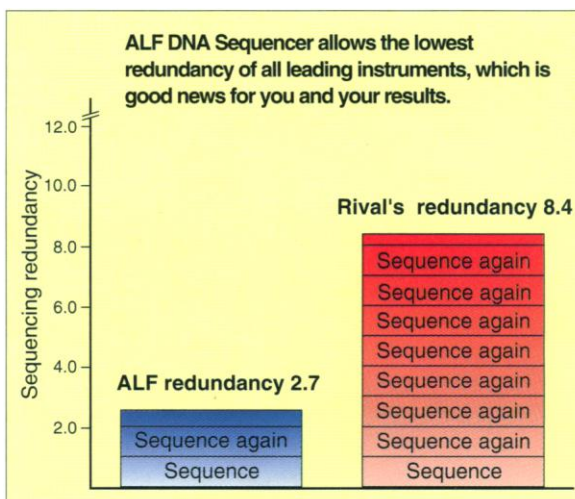
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### References

1. Comparison of three non-isotopic automated DNA sequence analysis systems. *Clinical Chemistry*, 38 (1992) 465, Van Ranst, M., Fiten, P., Voet, M., Volckaert, G., Opdenakker, G.
2. Automated low-redundancy large-scale DNA sequencing by primer walking. *BioTechniques* 15 (1993) 714-721, Voss, H., Wiemann, S., Grotheus, D., Sensen, C., Zimmermann, J., Schwager, C., Stegemann, J., Erfle, H., Rupp, T., Ansorge, W.
3. Sequence length and error analysis of Sequenase and automated Taq cycle sequencing methods. *BioTechniques* 14 (1993) 442-447, Koop, B.F., Rowan, L., Chen, W.-Q., Deshpande, P., Lee, H., Hood, L.

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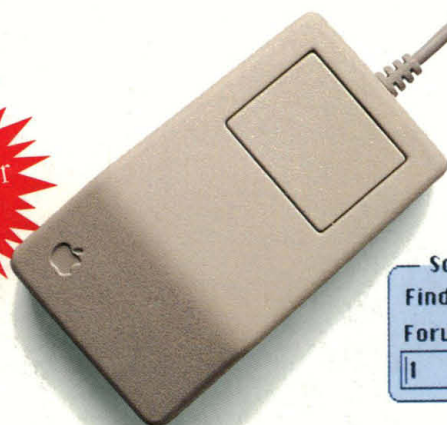


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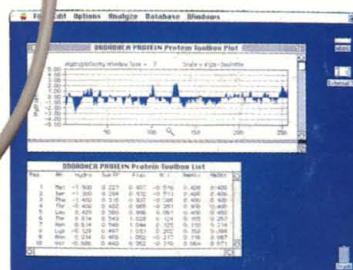
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