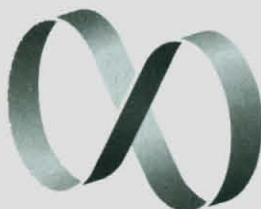


PRELIMINARY PROGRAM

1998 AAAS ANNUAL MEETING & SCIENCE INNOVATION EXPOSITION
FEBRUARY 12-17, 1998 • PENNSYLVANIA CONVENTION CENTER, PHILADELPHIA



EXPLORING
FRONTIERS—
EXPANDING
OPPORTUNITIES

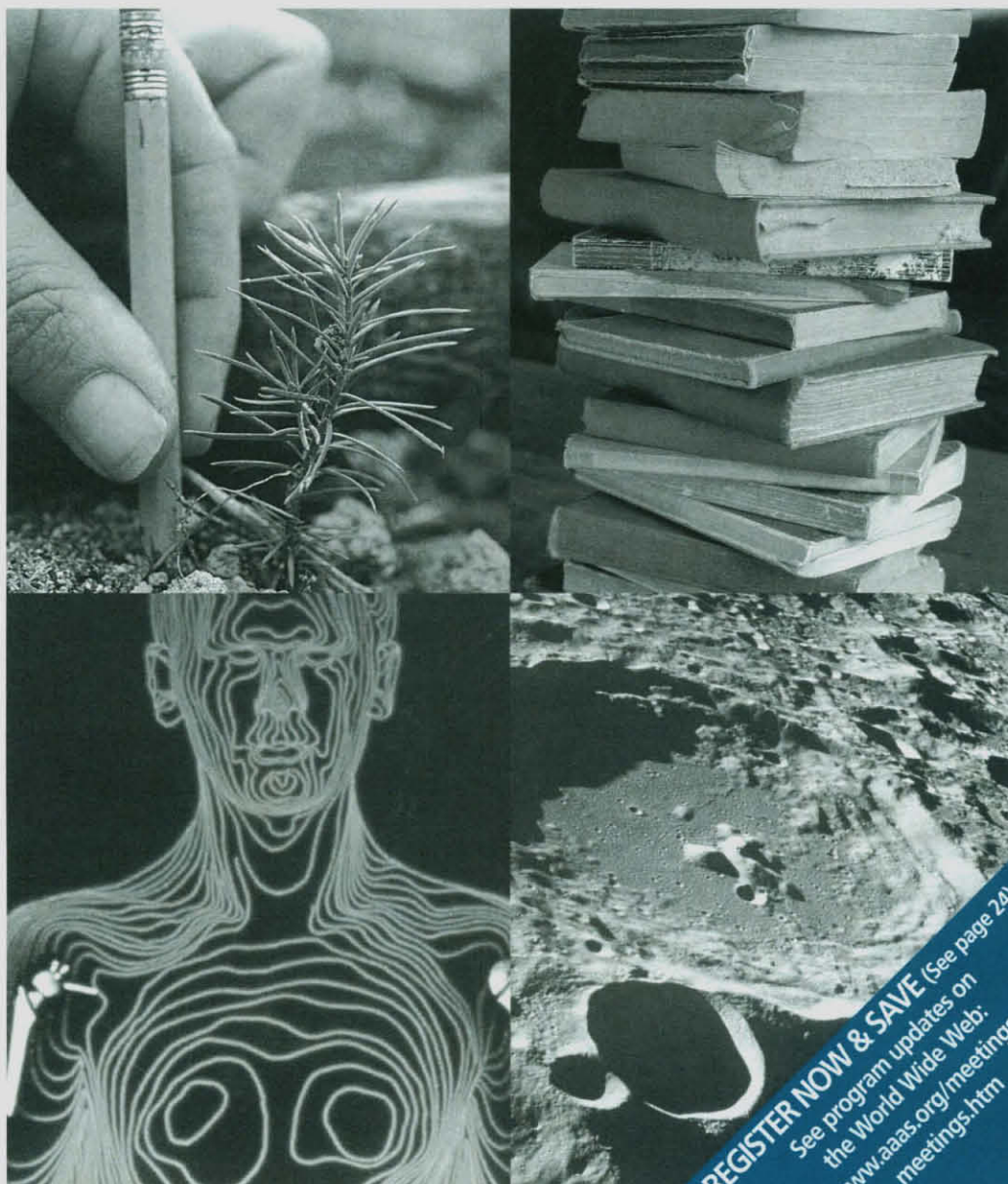
AAAS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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Harry Woolf
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Richard T. Johnson
Johns Hopkins University Hospital

Laura Meagher
Rutgers University

J. Craig Venter
The Institute for Genomic Research

James M. Wilson
University of Pennsylvania Medical Center

November 1997

Dear Colleague:

It is my pleasure to invite you to the *1998 AAAS Annual Meeting and Science Innovation Exposition*, where you will meet an array of scientists, educators, and policymakers as we examine issues and emerging research from diverse areas of science.

The 1998 meeting also offers you an excellent program. Top researchers from various fields — medical, environmental, evolutionary, physical, social, and technological — will convene to exchange and publicize new information. In fact, more than 5,000 of your colleagues are expected to be in Philadelphia to share their latest research, explore fertile synergies between disciplines, and debate today's critical issues in science policy and education.

The theme for the 1998 Meeting — Exploring Frontiers — Expanding Opportunities — sets the tone for a unique blend of symposia, topical and plenary lectures, specialized seminars, and poster presentations. Some special highlights:

Science Innovation offers exceptional symposia covering HIV/AIDS, Drug Design and Delivery, Immunology, and Biotechnology and Evolutionary Biology. Morning and afternoon topical lectures will highlight emerging developments in instrumentation and research ... see page 19 of this program for more details.

The Genome Seminar: Countdown to 2000 - Medicine (organized by AAAS, *Science*, and The Institute of Genomic Research) is a comprehensive 2-day seminar that will focus on the impact of genomics on science and the social, legal, ethical, and general communities. Leading medical researchers will examine state-of-the-art gene technologies and their potential for having major impact on human health, the economy, and society... more information on page 22.

The Forum for School Science will focus on Technology and Its Impact on Student Learning and will feature top educators and policymakers.



years of
advancing
science
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Also of particular interest — AAAS will celebrate its 150th Anniversary in Philadelphia. I encourage you to join us and be a part of this historic scientific event. Special activities planned include: an extraordinary opening plenary session on Thursday night; a gala reception in the Exhibition Hall on Friday; a unique historic display of AAAS celebrating 150 years of science, and much more. In addition, at the 1998 Meeting you can participate in the career development workshops, the *Science Career Fair*, and visit over 100 exhibits of publishers, computer companies, government agencies, and scientific equipment companies.

The 1998 Meeting offers numerous opportunities to meet, network and learn from many of the leading figures in various fields of science. Please join us in Philadelphia, the birthplace of the very first AAAS Meeting in 1848. Register now, and take advantage of the advance registration discount rates (see registration form on page 24). I look forward to seeing you there.

Sincerely,

Mildred S. Dresselhaus

Mildred S. Dresselhaus
AAAS President and 1998 Meeting Program Chair

All information
is as of 10/2/97.
Changes,
additions or
deletions
received after
that date will be
included in the
next printing of
this program.

Plenary Lectures

THURSDAY, FEBRUARY 12, 1998

Opening Convocation and Keynote Address

Dudley Herschbach, Chemistry
Department, Harvard University
*Benjamin Franklin's Scientific
Amusements*

FRIDAY, FEBRUARY 13, 1998

Plenary Lecture

Speaker TBA

SATURDAY, FEBRUARY 14, 1998

President's Address

Mildred Dresselhaus,
Massachusetts Institute of
Technology

SUNDAY, FEBRUARY 15, 1998

Plenary Panel: Views of the Future

Moderators/Discussants: Alvin
and Heidi Toffler
SPEAKERS
David Liddle*, Interval Research
Corporation

John Holdren, Harvard
University

MONDAY, FEBRUARY 16, 1998

Special Morning Lecture

US President William J.
Clinton*

Topical Lectures

FRIDAY, FEBRUARY 13, 1998

John N. Bahcall, Inst for Adv
Study

Theodore Childs, IBM

Tony DeRose, Pixar Animation
Studios

SATURDAY, FEBRUARY 14, 1998

John P. McGovern Award Lecture in the Behavioral Sciences

Michael Posner, University of
Oregon

George Sarton Lecture in the History and Philosophy of Science

Gerald E. Allen, Washington
University

Eugene Garfield, University of
Pennsylvania

Lester Reisberg, GTE

Richard N.L. Andrews,
University of North Carolina-
Chapel Hill

SUNDAY, FEBRUARY 15, 1998

Ellen Goldberg, Santa Fe
Institute

Alvin and Heidi Toffler

Barbara Boyle Torrey, NAS/NRC

C. Everett Koop
The Tobacco Wars

MONDAY, FEBRUARY 16, 1998

Michael Novacek, American
Museum of Natural History

Science Innovation Topical Lectures

FRIDAY, FEBRUARY 13, 1998

Harold Varmus, National
Institute of Health

SATURDAY, FEBRUARY 14, 1998

Frances Arnold, Caltech

Ellen Heber Katz, Wistar
Institute

SUNDAY, FEBRUARY 15, 1998

C. Thomas Caskey, Merck

MONDAY, FEBRUARY 16, 1998

Baruch S. Blumberg, Fox Chase
Cancer Center

Leadership Forum

MONDAY, FEBRUARY 16, 1998

Special Morning Lecture

8:00AM-9:30AM

US President William J.
Clinton*

AAAS 150th Birthday Celebration

10:00AM-11:00AM

Exhibition Hall
Convention Center Grand
Ballroom

Science Meets Society

11:50AM-12:30PM

Gro Harlem Brundtland,
Norwegian Parliament
*Environmental Challenges in a
Shrinking World*

12:40PM-1:20PM

Andrew S. Grove*, President
and CEO, Intel Corporation
*Telecommunications: Science and
Engineering for the Future*

Science and Technology for Tomorrow

1:30PM-3:00PM

Moderator: Mildred
Dresselhaus, MIT
Panel: Bruce Alberts, President
National Academy of Sciences
Kenneth Shine, President,
Institute of Medicine
William Wulf, President,
National Academy of
Engineering

(* = Invited, not yet confirmed)



DAILY TIME TABLE

February 12-17, 1998
Philadelphia Convention Center
*= Invited, not yet confirmed

	THURSDAY, 12th	FRIDAY, 13th	SATURDAY, 14th	SUNDAY, 15th	MONDAY, 16th	TUESDAY, 17th
Morning	Meeting Registration 2:00pm-7:00pm Convention Center	Meeting Registration 7:00am-7:00pm Convention Center	Meeting Registration 7:30am-5:00pm Convention Center	Meeting Registration 7:30am-5:00pm Convention Center	Meeting Registration 7:30am-5:00pm Convention Center	Meeting Registration 7:30am-12:30pm Convention Center
		SI Topical Lecture 8:00am-8:45am Convention Center	SI Topical Lecture 8:00am-8:45am Convention Center	SI Topical Lecture 8:00am-8:45am Convention Center	Special Morning Lecture 8:00am-9:30am US President William J. Clinton* Convention Center	Concurrent Sessions 8:00am-11:00am Convention Center
		Topical Lecture 8:00am-8:45am Convention Center	Topical Lecture 8:00am-8:45am Convention Center	Topical Lecture 8:00am-8:45am Convention Center		The Forum For School Science 8:00am-4:00pm Convention Center
		AJAS Oral Presentations 8:00am-12:00noon Marriott Grand Ballroom	Genome Seminar 8:00am-6:00pm Convention Center	Genome Seminar 8:00am-6:00pm Convention Center	Coffee Break 9:00am Convention Center Grand Ballroom	Career Workshops 8:30am-3:30pm Convention Center
		Concurrent Sessions 9:00am-12:00noon Convention Center	Concurrent Sessions 9:00am-12:00noon Convention Center	Concurrent Sessions 9:00am-12:00noon Convention Center	Exhibition 9:00am-2:00pm Convention Center Grand Ballroom	Science Career Fair 11:00am-4:00pm Convention Center
Afternoon		Student Award Competition Posters 9:30am-1:30pm Convention Center	Career Workshops 9:00am-6:00pm Convention Center	Career Workshops 9:00am-6:00pm Convention Center	AAAS Birthday Celebration 10:00am-11:00am Convention Center Grand Ballroom	
			Poster Session 10:00am-2:00pm Convention Center	Poster Session 10:00am-2:00pm Convention Center	Leadership Forum 11:50am-12:30pm 12:40pm-1:20pm 1:30pm-3:00pm (See program for details) Convention Center	
			Exhibition 10:00am-3:00pm Convention Center Grand Ballroom	Exhibition 10:00am-3:00pm Convention Center Grand Ballroom		Concurrent Sessions 12:30pm-3:30pm Convention Center
		SI Topical Lecture 1:00pm-1:45pm Convention Center	Exhibitor Workshops 12:00noon-2:00pm Convention Center Grand Ballroom	Exhibitor Workshops 12:00noon-2:00pm Convention Center Grand Ballroom	The Forum For School Science 1:00pm-6:00pm Convention Center	
		Topical Lecture 1:00pm-1:45pm Convention Center	SI Topical Lecture 2:00pm-2:45pm Convention Center	Topical Lecture 1:00pm-2:45pm Convention Center	SI Topical Lecture 2:00pm-2:45pm Convention Center	
Evening		Concurrent Sessions 2:00pm-5:00pm Convention Center	Topical Lecture 2:00pm-2:45pm Convention Center	SI Topical Lecture 2:00pm-2:45pm Convention Center	Topical Lecture 2:00pm-2:45pm Convention Center	
		AJAS Posters 3:00pm-5:00pm Convention Center	Concurrent Sessions 3:00pm-6:00pm Convention Center	Concurrent Sessions 3:00pm-6:00pm Convention Center	Career Workshops 2:00pm-6:00pm Convention Center	
		Exhibition Opening Night Reception 4:30pm-6:30pm Convention Center Grand Ballroom			Concurrent Sessions 3:00pm-6:00pm Convention Center	
	Opening Convocation and Keynote Address 5:30pm-7:30pm Convention Center	Plenary Lecture 6:30pm-7:30pm Convention Center	President's Lecture 6:30pm-7:30pm Convention Center	Plenary Lecture 6:30pm-7:30pm Convention Center	Poster Session 4:00pm-6:30pm Convention Center	
			Presidents Reception 7:30pm-8:30pm Marriott Grand Ballroom		AAAS Awards Ceremony 6:30pm-8:00pm Marriott Grand Ballroom	

PROGRAM

All information is as of 10/2/97. Changes, additions or deletions received after that date will be included in the next printing of this program.

Symposia are grouped by discipline areas.

KEY CODE

COM = Computers and Information
EDU = Education and Public Outreach
ENV = Environment and Life Sciences
HIS = History
IND = Industry and Engineering
MED = Medicine and Biotechnology
PHY = Physical Sciences and Mathematics
POL = Policy and Economics
SCI = Science Innovation
SOC = Social Science



COMPUTERS AND INFORMATION

FRIDAY, FEBRUARY 13, 1998

Data Selection: Good Research or Fudging the Data?

(2:00PM-5:00PM)

Org by Diane Hoffman-Kim, Harvard Univ; Stephanie J. Bird, MIT

SPEAKERS

Ullica Segerstrale, Illinois Inst of Tech

Good to the Last Drop?: Conflicting Views on Milliken's Practices

Bernard Gert, Dartmouth College

Telling the Truth

Jonathan A. King, MIT
A Researcher's Perspective on Data Selection

Diane Hoffman-Kim, Harvard Univ
Data Selection for Junior Researchers: We Don't Just Learn By Osmosis

Stephanie J. Bird, MIT
Trust and Data Selection: What Are We Talking About?

The Grand Unified eArchive: The State of Scientific Publishing in the Year 2010

(2:00PM-5:00PM)

Org by R. Stephen Berry, Univ of Chicago; Alexander Fowler, AAAS

SPEAKERS

Peter Boyce, Amer Astronomical Soc

The State of Scientific Publishing in the Year 2010

Paul Ginsparg*, Los Alamos Natl Lab
The Scientist's Role in ePublishing

Ann Okerson*, Yale Univ
Cybrarians and the eArchive: Library and Information Science in 2010

Andrew Odlyzko*, AT&T Labs
The Economics of Scientific ePublishing in the Year 2010

R. Stephen Berry, Univ of Chicago
How We Got Here From There: Reflections on the Transition from Paper

SATURDAY, FEBRUARY 14, 1998

From Print to Electronic: The Transformation of Scientific Communication

(9:00AM-12:00 NOON)

Org by Clifford Lynch, Coalitions for Networked Info; Richard Hill, Amer Soc for Info Sci

MODERATOR: Julie M. Hurd, Univ of Illinois-Chicago
An Overview of Scientific Communication: A System in Transition

SPEAKERS

Paul F. Uhler, Natl Resch Council
Issues of Global Access to Scientific Data

John Walsh, Univ of Illinois-Chicago
Virtual Colleges: The Transformation of Scientific Work

Ellis Rubinstein, AAAS
A Cyber-Editor's Vision of Scientific Information Dissemination

Clifford Lynch, Coalitions for Networked Info
Integrity Issues in Electronic Communication and Publication

Government, Academia, and Industry in the History of Computing in the Sciences

(9:00AM-12:00 NOON)

Org by Robert W. Seidel, Charles Babbage Inst; Anne Fitzpatrick, Charles Babbage Inst

SPEAKERS TBA

SUNDAY, FEBRUARY 15, 1998

Digital Library Research and Development: Recent Advances and Next Steps

(3:00PM-6:00PM)

Org by Bonnie C. Carroll, Info Intl Assoc; Clifford Lynch, Coalitions for Networked Info

SPEAKERS

Steven Griffin, Natl Sci Fnd
Technical Challenges and Successes in Digital Library Research

Robert Wilensky*, Univ of California-Berkeley
The University of California-Berkeley Digital Library Project: Accessing Multimedia Repositories

Bruce R. Schatz, Univ of Illinois-Urbana-Champaign
The University of Illinois Digital Library Project: Federating Distributed Repositories of Scientific Literature

Ronald Larsen, Defense Adv Resch Projects Agency-DOD
Integrating Digital Library, Visualization, and Collaboration Requirements and Research Challenges: A New Research Initiative

William Arms, Corp for Natl Resch Initiatives
Digital Libraries - 2: Where Are We Going from Here?

The Computer Will See You Now: Computers in Clinical Medicine

(9:00AM-12:00 NOON)

Org by Deborah C. Runkle, AAAS; David C. Classen, Latter Day Saints Hosp

SPEAKERS

David C. Classen, Latter Day Saints Hosp
An Overview of Computers in Clinical Practice

David C. Classen, Latter Day Saints Hosp
Antibiotic Assistant: A Demonstration

J. Marc Overhage, Indiana Univ-Schl of Med
A Computerized Outpatient System

Richard Satava, Yale Univ-Schl of Med
Advanced Medical Technologies in Surgery and Telemetric Medicine

Francoise Gilbert, Alzheimer and Gray
The Legal Challenges Before Us

(* = Invited, not yet confirmed)

The Role of Models: From Cultural Anthropology to Particle Physics
(3:00PM-6:00PM)

Org by E. L. Lehmann, Univ of California-Berkeley; Juliet P. Shaffer, Edu Test Serv

SPEAKERS

Gordon Kane, Univ of Michigan-Ann Arbor
Models and Types of Understanding in Particle Physics

Bradd Shore, Emory Univ
Human Cultural Adaptation and the Double Life of Models

David A. Freedman, Univ of California-Berkeley
From Association to Causation via Statistical Modeling

Michael Kahana, Brandeis Univ
Cognitive Modeling: The Challenge of Bridging Levels

Warren J. Ewens, Univ of Penn
The Role of Models in Evolutionary Biology

MONDAY, FEBRUARY 16, 1998

Anonymous and Pseudonymous Communications on the Internet
(3:00PM-6:00PM)

Org by Albert H. Teich, AAAS; Mark S. Frankel, AAAS

MODERATOR: Joseph I. Rosenbaum, Hughes, Hubbard & Reed, LLP

SPEAKERS

Michael Froomkin*, Univ of Miami Law Schl
The Law and Anonymous and Pseudonymous Communications on the Internet

Christina Allen*, Electric Communities
Electronic Commerce and Anonymous and Pseudonymous Communications

Gary Marx, Woodrow Wilson Intl Ctr for Scholars
Social Functions and Dysfunctions of Anonymity

Peter Wayner, BYTE Magazine
Technology of Internet Anonymity

(* = Invited, not yet confirmed)

Albert H. Teich, AAAS; Mark S. Frankel, AAAS
Preliminary Report of the AAAS Project on Anonymous and Pseudonymous Communications on the Internet

Biological Diversity Information Infrastructure Development: Transnational Initiatives
(3:00PM-6:00PM)

Org by Bonnie C. Carroll, Info Intl Assoc; Gladys Cotter, US Geo Survey

SPEAKERS

Gladys Cotter, US Geo Survey
A Multiplicity of Biodiversity Information Initiatives

Robin O'Malley, Dept of Interior
Development of Inter-American Biodiversity Information Network (IABIN): Current Status and Future Plans

Susan Tressler, Species Survival Commission, IUCN
The Biodiversity Conservation Information System (BCIS) of the IUCN

Preston Hardison, Biodiversity Info Network
BIN 21 and Technology Initiatives

Xavier Silva del Pozo, The Nature Conservancy
The Nature Conservancy's Biodiversity Information Activities

TUESDAY, FEBRUARY 17, 1998

The Future of Information Technology and Communications on the Internet: Who Owns the Internet
(8:00AM-11:00 AM)

Org by Alexander Fowler, AAAS; Mark S. Frankel, AAAS

SPEAKERS TBA

Communicating Online: Where Are the Ethical and Practical Landmines?
(12:30PM-3:30PM)

Org by Vivian Weil, Illinois Inst of Tech

SPEAKERS

Michael Davis, Illinois Inst of Tech
Adventures With Software Engineers: Writing a Code of Ethics by E-Mail

Gary T. Marx, Woodrow Wilson Intl Ctr for Scholars
Ethics and the New Information Technologies

Bruce Bimber, Univ of California-Santa Barbara
Political Participation on the Internet: How Does It Compare with Traditional Political Participation?

Rob Kling, Indiana Univ
Understanding the Role of Electronic Communication in Scholarly Life

May also be of interest—

Astrostatistics, PHY pg 16
Environmental Remote Sensing..., ENV pg 10
Kill All the Mosquitoes or..., POL pg 18
Science for the Public on..., EDU pg 7
The Global Positioning System..., see ENV pg 9
Thermodynamics and Information Theory..., see PHY pg 16
Wavelets: The Latest Big Splash in..., see PHY pg 16



EDUCATION AND PUBLIC OUTREACH

FRIDAY, FEBRUARY 13, 1998

Changing the Teaching of Undergraduate Science and Mathematics
(2:00PM-5:00PM)

Org by Deborah Hughes Hallett, Harvard Univ; Brad Osgood, Stanford Univ
SPEAKERS TBA

How Scientists Really Think: Beyond the Myths of Discovery
(9:00AM-12:00 NOON)

Org by Kevin Dunbar, McGill Univ

SPEAKERS

Kevin Dunbar, McGill Univ
How Scientists Really Think: Beyond the Change Discovery

Lindley Darden, Univ of Maryland-College Park
How Scientists Use Anomalies

Janice Glasgow, Queen's Univ
How Scientists Use Images: Using Computational Imagery to Discover Protein Structure

David Klahr, Carnegie Mellon Univ
Beginning Science: Can Young Children Design Experiments and Interpret Evidence?

Paul Thagard, Univ of Waterloo
The Discovery of the Bacterial Cause of Peptic Ulcers

The Science of Chocolate
(9:00AM-12:00 NOON)

Org by Albert H. Teich, AAAS; Jill H. Pace, Amer College of Real Estate Lawyers
SPEAKERS TBA

SATURDAY, FEBRUARY 14, 1998

Educational Technology, Contemporary Theories of Learning, and Some Applications
(9:00AM-12:00 NOON)

Org by Doreen R. Steg, Drexel Univ; Kirstie Bellman and Chris Landauer, The Aerospace Corp

SPEAKERS

Doreen R. Steg, Drexel Univ
Contemporary Theories of Learning

Daniel Bobrow, Xerox PARC
Applicable Technology

Kirstie Bellman, The Aerospace Corp

Computer-Aided Education and Technology Initiative

Rosemary Mazzatenta, Schl District of Phila; David Silbermann, Schl District of Phila; and Cheryl Fox, Temple Univ

Self-Controlled Interactive Learning Systems and the Philadelphia Story

Kevin Kreitman, Applied Systematics
The Concurrent Design of Educational Content, Process and Technology

Chris Landauer, The Aerospace Corp
Connectivity Is Not Communication

**More Effective Learning
Outcomes from Inquiry-
Based Science Laboratory
Instruction**

(3:00PM-6:00PM)

Org by Francis X. Sutman,
Temple Univ and Rowan Univ
SPEAKERS

Francis X. Sutman, Temple
Univ and Rowan Univ
*Definition for Inquiry-Based
Laboratory Instruction*

Joseph S. Schmuckler, Temple
Univ

*Meta Analyses of Studies that
Support Inquiry-Based Laboratory
Instruction*

Alexandria Hilosky, Harcum
College
*Implications for Future Practice:
Laboratory Centered Science
Instruction, Grades 13-14*

William F. McComas, Univ of
Southern California
*The Nature of Laboratory
Instruction: Actual Versus Desired
Approaches*

Sandra H. Fradd and Okhee
Lee, both of Univ of Miami
*Inquiry Based Hands-On
Experiences with Linguistically
Diverse Students*

William J. Priestley and Holly
Priestley, Morrisville
Middle/High Schl and Ctr for
Sci Lab Studies
*Science Teachers' Longer Term
Professional Development Hands-
on/Computer Modeled Instruction*
DISCUSSANT: Gerhard L.
Salinger, Natl Sci Fnd
*Synthesis and Implications for
Laboratory-Based Inquiry*

**Science for the Public on
Demand, Online?**

(3:00PM-6:00PM)

Org by Bruce V. Lewenstein,
Cornell Univ
SPEAKERS

Sharon Dunwoody, Univ of
Wisconsin-Madison
*Why "Science on Demand"?:
Theoretical Perspectives*

Vicki Freimuth*, Ctrs for
Disease Control and Prevention
*Science on Demand Before the
Web: The Cancer Hotline*

Thomas Hoban, North Carolina
State Univ
*Existing Systems for Science on
Demand: The Extension System*

Esther de Groot, Dutch Fnd for
the Pub Understanding of Sci,
Tech and the Humanities
*Science on Demand: The
European Experience*

Julie Doty, Free Library of Phila
*Science on Demand: A Public
Library Perspective*

Marcia C. Linn, Univ of
California-Berkeley
*Evaluating Websites: Does the
Public Demand What the Internet
Pushes?*

SUNDAY, FEBRUARY 15, 1998

**Advocating Scientific
Literacy: A History of the
Future**

(3:00PM-6:00PM)

Org by Jane Maienschein,
Arizona State Univ

SPEAKERS

Sally Gregory Kohlstedt, Univ of
Minnesota
Arguments from 1848

Paul L. Farber, Oregon State
Univ
Science for the Literate

Gerald Holton, Harvard Univ
*1948: The New Imperative for
Science Literacy*

George D. Nelson, AAAS
Advocating Science Literacy

Jane Maienschein, Arizona State
Univ
*To the Future: Arguments for
Scientific Literacy*

**Learning for Success:
Educating Scientists,
Engineers, and Technicians
for the 21st Century Global
Workforce**

(3:00PM-6:00PM)

Org by Luis A. Salicrup,
APRSE and Techno-Sur &
Assoc

SPEAKERS TBA

**Science Education Reform:
The Philadelphia Story**

(9:00AM-12:00 NOON)

Org by Marlene Hilkowitz,
Phila Schl District; Mary R.
Koppal, AAAS
SPEAKERS TBA

**Science for the Naked Eye or
the Physics of Everyday
Experience, XXIV**

(3:00PM-6:00PM)

Org by Rolf M. Sinclair, Natl
Sci Fnd

SPEAKERS TBA

Science is Fun!

(9:00AM-12:00 NOON)

Org by Bassam Z. Shakhshiri,
Univ of Wisconsin-Madison
SPEAKERS TBA

**Understanding US Math and
Science Education in a Global
Context**

(9:00AM-12 NOON)

Org by Jeanne E. Griffith, Natl
Sci Fnd; William H. Schmidt,
Michigan State Univ

SPEAKERS

William H. Schmidt, Michigan
State Univ
What Do Students Learn?

Harold W. Stevenson, Univ of
Michigan-Ann Arbor
*How is US Schooling Different
From Germany and Japan?*

Senta Raizen, The Natl Ctr for
Improving Sci and Edu
*US Science Education: From
Elementary to Middle School*

Teresa Smith, Boston College
*How Do Students Internationally
Perform on TIMSS?*

Leland Cogan, Michigan State
Univ
*How Do US Students' Motivation
and Time Use Compare
Internationally?*

DISCUSSANT: Tjeerd Plomp,
Univ of Twente

**Using Research to Advance
Science Education Reform**

(3:00PM-6:00PM)

Org by George D. Nelson,
AAAS; Mary R. Koppal, AAAS
SPEAKERS TBA

MONDAY, FEBRUARY 16, 1998

**Cultural and Social
Foundations of School
Achievement**

(3:00PM-6:00PM)

Org by Karl L. Alexander,
Johns Hopkins Univ; Ulric
Neisser, Cornell Univ

SPEAKERS

Karl L. Alexander; Doris R.
Entwisle, Johns Hopkins Univ
*Isolating Schooling's Contribution
to Achievement: School Year versus
Summer Gains*

A. Wade Boykin, Howard Univ
*The Schooling of African-
American Children: A Proactive
Social Capital Analysis*

David W. Grissmer, Rand Corp
*Effects of Public Investment and
Social Capital on Achievement*

Larry V. Hedges, Univ of
Chicago
*How Are School Resources Related
to Academic Achievement?*

Harold W. Stevenson, Univ of
Michigan-Ann Arbor
*The Cultural Context of
Mathematics Achievement*

DISCUSSANT: Ulric Neisser,
Cornell Univ

TUESDAY, FEBRUARY 17, 1998

**Institutionalizing and
Sustaining Educational
Change: What Happens
When the Grant Runs Out?**

(8:00AM-11:00AM)

Org by Norman P. Willett,
Temple Univ-Schl of Med;
Matthew H. Bruce, Temple
Univ

SPEAKERS TBA

**Reaching Out: The History
and Future of Public
Outreach of Science in the
United States**

(12:30PM-3:30PM)

Org by Bruce V. Lewenstein,
Cornell Univ

MODERATOR: Carol L.
Rogers, Univ of Maryland-
College Park

SPEAKERS

Alan J. Friedman, NY Hall of Sci
Museums and Communities

**Strategies for Enhancing
21st Century Education**

(12:30PM-3:30PM)

Org by Harold B. White III,
Univ of Delaware; Herman T.
Epstein, Marine Bio Lab;
Michael Shayer, King's College-
Univ of London

SPEAKERS

Herman T. Epstein, Marine Bio
Lab
*Using Brain Growth Data to Help
Design Teaching Strategies*

Michael Shayer, King's College-
Univ of London
*Cognitive Acceleration Does Work:
You Can Make Students Better
Learners*

Geraldine Lockard,
Queensborough Community
College
*Empowering Secondary and Post-
Secondary Learners Through
Cognitive Awareness*

Barbara J. Duch, Univ of Delaware
*Institutional Change: Introducing
Problem-Based Learning*

Deborah E. Allen, Univ of
Delaware
*Use of Near-Peer Tutors in
Undergraduate Problem-Based
Science Courses*

May also be of interest ...

Alternate Mechanisms for Motor
and..., MED pg 14
Digital Library Research and
Development..., see COM pg 5
Divergence in Linguistic
Evolution..., SOC pg 20
Entry Point: Science and
Technology..., POL pg 16
The Changing Science of...,
ENV pg 8
Evolving Expectations for
Scholarship and..., POL pg 17
Exploring New Frontiers in
Geometry..., PHY pg 14
Fueling the "Light of Science"...,
POL pg 18
Government, Academia, and
Industry in..., COM pg 5
Implications of Changing
Affirmative..., POL pg 17

(* = Invited, not yet confirmed)

Postdocs: Defining Our Role...,
POL pg 18
Results of Professional Society...,
POL pg 18
Should Organic Chemistry be
Eliminated..., MED pg 13
The Grand Unified eArchive...,
COM pg 5
The Role of Models..., COM pg 6
Women in Science, POL pg 17



**ENVIRONMENT AND
LIFE SCIENCES**

FRIDAY, FEBRUARY 13, 1998

**Dredging Harbors: What to
Do with Toxic Waste**
(2:00PM-5:00PM)

Org by Gerald M. Friedman,
Brooklyn College-CUNY;
William Corso, NJ Marine Sci
Consortium

SPEAKERS
Seth Ausubel, US EPA
*A Toxics Source Reduction
Program for the New York-New
Jersey Harbor Estuary*

Dennis J. Suszkowski, Hudson
River Fnd
*Cleaning Up New York Harbor
Sediments by Reducing
Contaminant Inputs*

Bradford Butman, US Geo Survey
*Predicting the Fate of
Contaminants in the New York
Bight*

Roelof Versteeg, Columbia Univ
*A System-Based Research Effort
for New York Estuary Sediment
Contamination Reduction*

Eric A. Stern, US EPA
*Treatment of Contaminated
Sediments in New York/New
Jersey Harbor*

Lenard Houston, US Army
Corps of Engineers
*Preparing a Dredged Material
Management Plan for the Port of
New York/New Jersey*

David D. Caulfield, Caulfield
Engineering
*Summary of Analytical Acoustic
Techniques for the Mapping of
Contaminated Sediments in
Harbors*

**The Changing Science of
Environmental Science**

(9:00AM-12 NOON)

Org by James M. Galloway,
Univ of Virginia
SPEAKERS TBA

**Frontiers in Plankton
Dynamics**

(2:00PM-5:00PM)

Org by Hal Caswell, Woods
Hole Oceanographic Inst

SPEAKERS
Daniel Grünbaum, Univ of
Washington
*The Behavioral and
Environmental Roots of
Aggregation and Patchiness*
Charles H. Greene, Cornell
Univ
*Eyes and Ears Beneath the Sea:
Video-Acoustic Imaging of Plankton*

Mercedes Pascual, Univ of
Maryland-Biotech Inst
*Plankton Life Cycles: Linking
Resources and Population Dynamics*
Michael G. Neubert, Woods
Hole Oceanographic Inst
*Nonlinear Dynamics of Plankton
Food Webs*

Donald B. Olson, Univ of Miami
*Coupling Planktonic Systems to
the Physical Environment*

**Global Shrimp Farming,
Mangroves, and People:
Finding a Sustainable Path**
(9:00AM-12:00 NOON)

Org by Joseph J. Molnar,
Auburn Univ
SPEAKERS

C. Kwei Lin, Asian Inst of Tech
*Management Strategies and
Approaches for Water Quality
Improvement in Shrimp Farming*
Claude E. Boyd, Auburn Univ
*Shrimp Farming and the
Environment*

Conner Bailey, Auburn Univ
*Shrimp Farming and Community
Development*

Omar Oyuela Olivera, Escuela
Nacional de Ciencias Forestales
*Expanding Shrimp Farms,
Shrinking Mangroves: The
Honduras Inventory*

SATURDAY, FEBRUARY 14, 1998

**Fossil Fuel as the Common
Denominator of Acid Rain,
Ozone, and Greenhouse
Gases: Considering the
Aggregated Costs and
Options**
(3:00PM-6:00PM)

Org by Mary Barber, Ecological
Soc of Amer; Orié L. Loucks,
Miami Univ
SPEAKERS TBA

**Human Dimensions of Global
Change: Where Do We Go
From Here?**
(9:00AM-12:00 NOON)

Org by Eugene A. Rosa,
Washington State Univ;
Thomas Dietz, George Mason
Univ

MODERATORS: Solange
Simoes, Univ of Michigan;
Roger E. Kasperson, Clark Univ
SPEAKERS

Eugene A. Rosa, Washington
State Univ
*Statistical Models for Assessing
Anthropogenic Sources of Global
Environmental Change*

Emilio F. Moran, Indiana Univ
*Scaling Issues in the Study of Land
Use/Cover Change*

Riley Dunlap, Washington State
Univ
*Public Perceptions of Global
Warming*

Oran R. Young, Dartmouth
College
*The Institutional Dimensions of
Global Change*

Thomas Dietz, George Mason
Univ
*Statistical Models for Assessing
Anthropogenic Sources of Global
Environmental Change*

Carlo Jaeger, EAWAG-Swiss Fed
Inst for Environ Sci and Tech
*The Human Factor in Integrated
Assessment*

Preparing for a New Century of Pest Management with Genes

(3:00PM-6:00PM)

Org by R. James Cook,
Agricultural Resch Serv-USDA;
Calvin O. Qualset, Univ of
California-Davis

SPEAKERS

Peter Day, Rutgers Univ
100 Years of Breeding for Resistance

Steve Tanksley, Cornell Univ
*Beyond Bt: A View of What's Possible
for Pest Management with Genes*

Calvin O. Qualset, Univ of
California-Davis
*Public-Sector Approaches to
Assuring Performance and Safety
of Pest Resistant Cultivars*

Robert B. Horsch, Monsanto
Life Sci Co
*Performance and Sustainability of
Pest Resistance Traits*

Clifford Gabriel, Ofc of Sci and
Tech Pol
*Current Status of Federal
Oversight of Genetic Traits for Pest
Resistance in Plants*

R. James Cook, Agricultural
Resch Serv-USDA
*Is the Science in Place for a New
Century of Pest Management with
Genes?*

Science and the Unpleasant: Risk Assessment and Urban Sewage Sludge

(9:00AM-12:00 NOON)

Org by Albert G. Medvitz;
Ellen Z. Harrison, Cornell
Univ

SPEAKERS

Albert G. Medvitz
*Assessing Risks When the Science
is Incomplete*

Murray B. McBride and David
Bouldin, Cornell Univ
*Toxic Metals in Sludge Grown
Crops: The Roots of Error*

David L. Lewis, US EPA
*Microbes in the Environment:
Challenges to Exposure
Assessment*

Uta Krogmann, Rutgers Univ
and Ellen Z. Harrison, Cornell
Univ

*Understanding the Difference:
Why European and United States
Sludge Standards Differ*

Michael Baram, Boston Univ-
Schl of Law
*A Precautionary Perspective on
Sludge Use in Agriculture*

Systematic Biology for the New Millenium

(3:00PM-6:00PM)

Org by Gary S. Waggoner, US
Geo Survey; Roy McDiarmid,
Natl Museum of Natural
History- Smithsonian Inst

SPEAKERS

Peter H. Raven*, Missouri
Botanical Garden
*Crisis in Biological Diversity:
Taxonomy and Biological
Information Sharing*

Joel Cracraft, Amer Museum of
Natural History
*Strategies for Building Global
Systematic Research*

Stephen Blackmore, Natural
History Museum
*Why and How to Build Taxonomic
Capability around the World*

James E. Rodman, Natl Sci Fnd
National Science Foundation's
Support of Taxonomic Research
and Training

Gary S. Waggoner, US Geo
Survey
*Recognizing the Need for
Taxonomic Information: A New
Federal Perspective*

SUNDAY, FEBRUARY 15, 1998

Planning for Mars Sample Return Missions: Scientific, Technical, and Social Challenges

(3:00PM-6:00PM)

Org by John D. Rummel,
Marine Bio Lab; Margaret Race,
SETI

SPEAKERS

Wesley T. Huntress, NASA
*Scientific Benefits of Mars
Exploration*

Klaus Keil, Univ of Hawaii-
Manoa
*The Scientific Analysis of Martian
Samples*

Rita R. Colwell, Univ of
Maryland
*Environmental and Scientific
Concerns About the Release of
"New" Microorganisms*

Jonathan Richmond, US Ctrs for
Disease Control and Prevention
*Assessing the Biological Hazard of
Unknown Materials*

Margaret Race, SETI
*Public Concerns, Scientific
Uncertainty, and Opportunities for
Resolution*

Ocean Sciences: Advances, Challenges, Policy, and Management

(9:00AM-12:00 NOON; 3:00PM-
6:00PM)

Org by Judith Kildow, MIT;
John W. Farrington, Woods
Hole Ocean Inst
SPEAKERS TBA

Population and Carrying Capacity: Beyond Malthus After Two Centuries

(3:00PM-6:00PM)

Org by Joel E. Cohen,
Rockefeller Univ and
Columbia Univ; William D.
Nordhaus, Yale Univ; Michael
S. Teitelbaum, Alfred P. Sloan
Fnd

SPEAKERS

Michael S. Teitelbaum, Alfred P.
Sloan Fnd
*The Bizarre Intellectual History of
the Malthusian-Marxian Debate
about Population*

Adrienne Germain, Intl
Women's Health Coalition
*Population Policy in Bangladesh:
Health, Empowerment, and Rights*

Joel E. Cohen, Rockefeller Univ
and Columbia Univ
*Equity and Earth's Human
Carrying Capacity*

Nancy Birdsall, Inter-Amer
Development Bank
*Inequality, Economic Growth, and
Sustainability*

William D. Nordhaus, Yale Univ
*Population and the Global
Environment*

Science and Sustainable Development: Who Needs It?

(9:00AM-12:00NOON)

Org by Michael Snyder, AAAS;
Marcia F. Astley, AAS

MODERATOR: Jane
Lubchenco, Oregon State Univ
SPEAKERS
Robert T. Watson, World Bank

Edgardo Gomez, Univ of the
Philippines

Dan Janzen, Univ of Penn

Uma Lele, World Bank

The Global Positioning System: A Powerful Tool for Global Change Research into the 21st Century

(3:00PM-6:00PM)

Org by Steven Businger, Univ
of Hawaii; Joost A. Businger,
Univ of Washington

SPEAKERS TBA

MONDAY, FEBRUARY 16, 1998

Environmental Chemicals as Endocrine Disrupters: Scientific Evidence and Public Policy

(3:00PM-6:00PM)

Org by Sheldon Krimsky, Tufts
Univ; Ingar Palmlund,
Linköping Univ

SPEAKERS

Theo Colborn, World Wildlife
Fund
*Endocrine Disruption: Where We
are Today*

Ernst Knobil*, Univ of Texas-
Med Schl
*Stephen Safe, Texas A&M Univ
Endocrine Disruptors and Human
Health: Is There a Problem*

David Policansky, Natl Resch
Council
*NCR Report on Hormonally
Active Agents in the Environment*

DISCUSSANTS: Herman B. W.
M. Koeter*, Org for Econ Coop
and Development; Anthony
Maciorowski*, US EPA; Ellen
Silbergeld, Univ of Maryland
Med Schl; John Peterson
Myers*, W. Alton Jones;
Shanna Swan, California Dept
of Health Serv

(* = Invited, not yet confirmed)

TUESDAY, FEBRUARY 17, 1998

Climate Change in the Susquehanna River Basin
(12:30PM-3:30PM)

Org by C. Gregory Knight, Penn State Univ; Eric J. Barron, Penn State Univ

SPEAKERS

Gregory Jenkins, Penn State Univ

*Simulating Present and Future Climate with Global-Regional Climate Models*Zhongbo Yu, Penn State Univ
*A Coupled Distributed Hydrologic Modeling System*Toby Carlson, Penn State Univ
*Land-Use Transformation by Urbanization in the Susquehanna River Basin*Brent Yarnal, Penn State Univ
*Integrated Assessment of the Susquehanna River Basin*David Abler, Penn State Univ
*Economic Impacts of Climate Change in the Susquehanna River Basin***Development in a Volatile World: How Embryos Cope with Environmental Stress**
(8:00AM-11:00AM)

Org by David Epel, Stanford Univ; James S. Clegg, Univ of California-Davis

SPEAKERS

James S. Clegg, Univ of California-Davis
*Overview*Susan L. Lindquist, Howard Hughes Med Inst
*Novel Regulatory Mechanisms Balance the Good and Bad of HSP70*Gretchen E. Hofmann, Univ of New Mexico
*Ecological Significance of Heat Shock Proteins as Molecular Chaperones*Roger A. Pedersen, Univ of California-San Francisco
*Role of Base Excision Repair in Mammalian Development*Joseph M. Kiesecker, Yale Univ
*The Effects of Ultraviolet Radiation on Amphibians*David Epel, Stanford Univ
*Embryogenesis in a Toxic World: Cell and Molecular Coping Strategies*Susan Brawley, Univ of Maine
*Environmental Effects Upon Reproductive Success in Marine Algae***Ecological Consequences of Land-Use History in Eastern North America**
(8:00AM-11:00AM)

Org by David R. Foster, Harvard Univ; John Aber, Univ of New Hampshire

SPEAKERS

David R. Foster, Harvard Univ
*Patterns of Land-Use and Forest Change in Eastern U.S.*Monica G. Turner, Univ of Wisconsin-Madison
*Consequences of Land-Use Change for Southern Appalachian Forest Plants*Robert A. Askins, Connecticut College
*Decline of Open-Habitat Birds in the Eastern United States*John Aber, Univ of New Hampshire
*Land-Use Conditioning Forest Ecosystem Response to Nitrogen Deposition*Steve Wofsy, Harvard Univ
*Land-Use History and Patterns of Trace Gas Fluxes From Temperate Forests***Emerging Water Management Issues in Africa**
(8:00AM-11:00AM)

Org by Peter Schmidt, AAAS; Thomas L. Crisman, Univ of Florida

SPEAKERS TBA

Environmental Remote Sensing: New Developments and Applications
(12:30PM-3:30PM)

Org by John F. Shroder, Jr., Univ of Nebraska-Omaha; Michael P. Bishop, Univ of Nebraska-Omaha

SPEAKERS

Howard A. Zebker, Stanford Univ
*Measuring Earth Crustal Deformation with Interferometric Synthetic Aperture Radar*Dale A. Quattrochi, NASA-Marshall Space Flight Ctr
*Scale in Remote Sensing and GIS: Towards a "Science of Scale"*John R. Estes, Univ of California-Santa Barbara
*Global Mapping: Baseline for Global Change*John R. Jensen, Univ of South Carolina
*Monitoring Dynamic Environments: Coastal Change Detection*Kamesh Lulla, NASA-Johnson Space Ctr
*International Space Station: New Opportunities for Remote Sensing Science*John F. Shroder, Jr. and Michael P. Bishop, Univ of Nebraska-Omaha
*Environmental Remote Sensing: New Developments and Applications***May also be of interest ...**Biological Diversity Information..., COM pg 6
Biotechnology and Evolutionary..., SCI pg 20
Darwinian Perspectives on the..., SOC pg 20
Defense Mechanisms Across..., SCI pg 20
How Mechanical Forces are Sensed..., SCI pg 19
How Scientists Really Think..., EDU pg 6
It's Written in Stone..., SOC pg 20
Kill All the Mosquitoes or..., POL pg 18
Properties of Mind, MED pg 14
Race and Human Evolution, SOC pg 21
The Economic Consequences of..., POL pg 19
The Epigenetic Approach to..., MED pg 13
The Evolutionary Base of the..., SOC pg 20
The Rights and Wrongs of Cloning..., MED pg 13The Role of Models..., COM pg 6
Thermodynamics and Information..., PHY pg 16
Understanding Population Change, SOC pg 21
What Should be the Priorities for..., IND pg 11

HISTORY

FRIDAY, FEBRUARY 13, 1998

AAAS at 150: The Past as Prologue?
(2:00PM-5:00PM)

Org by Michele Aldrich, Cornell Univ; Albert H. Teich, AAAS

CHAIR: William T. Golden, Amer Museum of Natural History

SPEAKERS

Julie R. Newell, Southern Polytech State Univ
*Origins and Founding of AAAS, 1840-1865*Michele Aldrich, Cornell Univ and Alan E. Leviton, Cal Academy of Sci
*The Dark Ages of AAAS, 1865-1900*Michael M. Sokal, Worcester Polytech Inst
*Science and the AAAS, 1895-1945*Peter Kuznick, American Univ
*Opting for Life? The AAAS and the Vietnam War*Jeff Ellis, Children's Hosp
*When Green was Pink: AAAS, Barry Commoner, and Environmentalism***May also be of interest ...**Advocating Scientific Literacy..., EDU pg 7
Atmospheric Electricity..., PHY pg 16
Divergence in Linguistic Evolution..., SOC pg 20
Ecological Consequences of Land-Use..., ENV pg 10

(* = Invited, not yet confirmed)

The Changing Science of..., ENV pg 8
Government, Academia, and Industry in..., COM pg 5
How Astronomy Expanded into..., PHY pg 15
It's Written in Stone..., SOC pg 20
One Hundred and Fifty Years of Racial..., SOC pg 21
Paradigms for the Sciences..., PHY pg 15
Petroleum: The Past, Present, and... IND pg 11
Reaching Out: The History and ..., EDU pg 7
Riemann to Strings..., PHY pg 16



INDUSTRY AND ENGINEERING

FRIDAY, FEBRUARY 13, 1998

Fundamental Research and Innovation: Health of the Industrial Enterprise (9:00AM-12:00 NOON; 2:00PM-5:00PM)

Org by Joseph A. Miller; Thomas C. O'Brien; Louis C. Glasgow; Bruce E. Smart; and Nancy K. Tidona, all of DuPont Co

AM SESSION SPEAKERS

Joseph A. Miller, DuPont Co
The Changing Global Environment for Fundamental Research in Industry

John K. Smith, Lehigh Univ
Historical Evolution of Fundamental Research and Industrial Innovation

Herbert S. Eleuterio, Natl Univ of Singapore
Innovation and Creativity in Industry: Current Health of the Enterprise

Edwin Mansfield, Univ of Penn
The Social Returns from Research

Paul S. Anderson, DuPont Merck Pharm Co
Vision 20/20: A Roadmap for the Future

PM SESSION

MODERATOR: Theodore W. Schlie, Lehigh Univ
SPEAKERS

Joseph A. Miller, DuPont Co
Fundamental Research Perspectives From DuPont

William F. Brinkman, Bell Labs and Lucent Tech
Lucent Technologies Research Needs

L. Louis Hegedus, Elf Atochem North Amer, Inc
Elf Atochem North American Perspectives on Fundamental Research

Philip H. Brodsky, Monsanto Corp
Fundamental Research in Industry: A Monsanto Perspective

DISCUSSANTS: John K. Smith, Lehigh Univ; Herbert S. Eleuterio, Natl Univ of Singapore

Edwin Mansfield, Univ of Penn
Paul S. Anderson, DuPont Merck

What Should be the Priorities for US Energy Research and Development (9:00AM-12:00 NOON)

Org by Barbara Goss Levi, *Physics Today*

SPEAKERS

John P. Holdren, Harvard Univ

DISCUSSANTS: John F. Ahearne, Duke Univ and Sigma Xi; Joseph Romm, US DOE; William Fulkerson, Univ of Tennessee; Robert Williams, Princeton Univ; William Happer, Princeton Univ

SATURDAY, FEBRUARY 14, 1998

Green Technology and Public Policy (9:00am-12:00 NOON)

Org by Mark Meo, Univ of Oklahoma
SPEAKERS TBA

New Frontiers in Electrochemical and Solid-State Science and Technology (9:00AM-12:00 NOON)

Org by Robert P. Frankenthal, Bell Labs and Lucent Tech; Jerome Kruger, Johns Hopkins Univ

SPEAKERS

Allen J. Bard, Univ of Texas-Austin

Nanoscale Electrochemistry: New Understanding and Applications

Kathleen C. Taylor, General Motors, Inc
New Power Sources for the 21st Century: From Batteries to Fuel Cells

Frederico Capasso, Bell Labs
Nanoscale Solid State Science and Technology: New Understanding and Devices

Robert A. Laudise, Bell Labs and Lucent Tech
New Materials for Solid State Science and Technology

Richard P. Buck, Univ of North Carolina
Electrochemical Sensors: Biological and Medical Applications

Petroleum: The Past, Present, and Future of a Needed Resource (9:00AM-12:00 NOON)

Org by Thomas S. Ahlbrandt, US Geo Survey

SPEAKERS

William Brice, Univ of Pittsburgh and Samuel T. Pees, Samuel T. Pees & Assoc
History of Petroleum Resources: The American Beginning

Edward David, Amer Assoc of Petro Geo
The Current State of the Petroleum Industry

Lee Gerhard, Kansas Geo Survey
Environmental Evolution of Petroleum Exploration and Production: Meeting the Challenge
Arthur Green, Exxon Exploration Co
Petroleum Exploration in a World without Walls: The Role of Science and Technology

Marlan Downey, Southern Methodist Univ and Univ of Oklahoma
Emerging Technology as a Component of Planning in the Energy Industry

Marcus E. Milling, Amer Geo Inst
Challenges in the Global Petroleum Market: Politics, Education, and Societal Needs

The University-Industry Research Connection: Recent Research Results (3:00PM-6:00PM)

Org by Robert P. Morgan, Natl Academy of Eng and Washington Univ; J. David Roessner, SRI Intl and Georgia Inst of Tech

SPEAKERS

Donald E. Strickland, Southern Illinois Univ-Edwardsville
Assessing University-Based Research Contributions to Industry

Catherine P. Ailes, SRI Intl
The Impact on Industry of Interaction With Engineering Research Centers

Early Bird Winner

Congratulations to Dr. Robert Ruben of Montefiore Medical Center in the Bronx, NY, the winner of this year's Early Bird Free Trip drawing. The FREE trip includes roundtrip airfare to Philadelphia and hotel accommodations for the 1998 AAAS Meeting.

(* = Invited, not yet confirmed)

Ben Martin, Univ of Sussex
*The Evolving Links Between
Universities and Industry in the
United Kingdom*

William R. Tash, Temple Univ
*A Survey of University-Industry
Research Centers*

DISCUSSANTS: Linda E.
Parker, Natl Sci Fnd; Tyrone
Mitchell, Corning Inc

**Trends and Impact of Global
Research Partnerships:
Universities, Industry and
Government**
(9:00AM-12:00 NOON)

Org by Francis A. Via, Akzo
Nobel; Gary Bottger, Eastman
Kodak Co

SPEAKERS

Francis A. Via, Akzo Nobel
*Introduction: Puncturing the
Myths of Partnerships*

Gary Bottger, Eastman Kodak
Co

*Advanced Technology Partnerships
with National Science Foundation
Centers*

James E. Anderson, Ford Motor Co
*The Partnership for a New
Generation of Vehicles (PNGV)*

E.J. Witterholt, BP Exploration
*Oil Industry Collaboration for
New Technology*

Frank L. Thiel
*Developing Productive Research
Partnerships in Russia*

David G. Parker, ICI Group
*Cooperative Research Programs in
China*

SUNDAY, FEBRUARY 15, 1998

**Future Research Needs and
Partnerships in the Basic
Materials Industries**
(3:00PM-6:00PM)

Org by Tina M. Kaarsberg,
Vista Tech, Inc; Helena Chum,
Natl Renewable Energy Lab

SPEAKERS

Helena Chum, Natl Renewable
Energy Lab

*The Role of the Laboratory
Coordinating Council in Industry-
Government Partnerships*

Delmar R. Raymond*,
Weyerhaeuser Corp
*Technology Roadmaps for
America's Forest, Wood, and Paper
Industry*

John Oleson*, Dow Corning
*Chemical Industry Technology
Vision 2020*

Paul L. Cuneo, Shell Oil
Products Co
*Future Research Needs and
Partnerships in the Petroleum
Refining Industry*

John Green*, Tech for the
Aluminum Assoc
*The Aluminum Industry:
Industry/Government
Partnerships for the Future*

Dennis Allen*, Cast Metal
Coalition
*Research and Development
Partnerships and Technology
Roadmap for the American Metal
Casting Industry*

**Priorities, Opinion, Policy:
How National
Assessment/Foresight Informs
Priority Setting**
(9:00AM-12:00 NOON)

Org by Mary Ellen Mogee,
Mogee Resch & Analysis
Assoc; Jennifer Sue Bond, Natl
Sci Fnd

SPEAKERS TBA

The Future of Fusion Energy
(9:00AM-12:00 NOON)

Org by Michael D. Crisp, US
DOE

SPEAKERS

Kenneth Fowler, Univ of
California-Berkeley
*Early History of Fusion Energy
Development*

John P. Holdren*, Harvard Univ
The Need for Fusion Energy

E. Michael Campbell, Lawrence
Livermore Natl Lab
*Scientific and Fusion Energy
Opportunities on the National
Ignition Facility (NIF)*

Francis W. Perkins, Jr, Intl
Thermo Experimental Reactor
*The Scientific Opportunities of
ITER*

Stewart Prager, Univ of
Wisconsin-Madison
New Directions in Fusion Research

May also be of interest ...

Bioengineering, MED pg 13
Challenges for the Chemical...,
PHY pg 15
Dredging Harbors..., ENV pg 8
Entry Point..., POL pg 16
Exploring the Frontiers of
Microscopy..., PHY pg 15
Government, Academia, and
Industry..., COM pg 5
Impact of Deregulation..., POL
pg 16
Manipulation of Science by...,
POL pg 17
Novel Therapies..., SCI pg 19
Planning for Mars Sample
Return..., ENV pg 9
Science and Sustainable
Development..., ENV pg 9
Wavelets: The Latest Big Splash
in..., PHY pg 16



**MEDICINE AND
BIOTECHNOLOGY**

FRIDAY, FEBRUARY 13, 1998

**Insights to Pain and Its
Management**
(9:00AM-12:00 NOON)

Org by Frank Porreca, Univ of
Arizona

SPEAKERS

Gary Bennett, Allegheny Univ of
the Health Sci
*Insights to Neuropathic Pain and
Its Management*

Frank Porreca, Univ of Arizona
Dynorphin in Chronic Pain States

Patrick Mantyh, Univ of
Minnesota
*Imaging the Neurochemistry of
Neciception*

Joyce A. DeLeo, Univ of
Dartmouth-Schl of Med
*The Role of Cytokines and Glia in
Neuropathic Pain*

John Hunter, Roche Bioscience
*Peripheral Sensory Neuron
Sodium Channels: Targets for
Novel Analgesics?*

**Obesity Update: Molecular
Biology of Energy
Regulation and Implications
for Treatment and Public
Policy**
(9:00AM-12:00 NOON)

Org by M.R.C. Greenwood,
Univ of California-Santa Cruz;
SPEAKERS

M.R.C. Greenwood, Univ of
California-Santa Cruz
*The Public Health and Policy
Implications of Obesity*

Jose F. Caro, Lilly Resch Labs
*Leptin and Its Role in Energy
Balance in Humans*

Craig Warden, Univ of
California-Davis
Energy Expenditure Genes

Michael W. Schwartz, Univ of
Washington and Puget Sound
VA Health Care System
*Leptin and the Central Nervous
System Regulation of Energy
Balance*

Judith S. Stern, Univ of
California-Davis
*New Treatments for Obesity:
Public Policy Implications*

**Radiation and Breast Cancer:
Current Views and
Implications for Exposed
Populations in the Former
Soviet Union**
(2:00PM-5:00PM)

Org by Elaine K. Gallin, US
DOE; Elizabeth J. Kirk, AAAS
SPEAKERS

Charles Land, Natl Cancer Inst
*Radiation Related Breast Cancer
Risk: Review of Current
Knowledge*

Armin Weinberg, Baylor College
of Med
*New Studies on Breast Cancer and
Environmental
Radiocontamination in NIS
Countries*

Anatoly Romanenko*, Resch
Ctr for Radiation Med
*Breast Cancer Mortality Rates in
Ukraine*

Roscus N. Doan, Prog for
Appropriate Tech in Health
Screening, Diagnosing, and
Treating Breast Cancer in Ukraine

(* = Invited, not yet confirmed)

Should Organic Chemistry be Eliminated as a Requirement for Medical School Admission?

(2:00PM-5:00PM)

Org by Dorothy F Bainton, Univ of California-San Francisco; Emilie H. S. Osborn, Univ of California-San Francisco

SPEAKERS

Michael E. Whitcomb, Assoc of Amer Med Colleges
The Role of the Association of American Medical Colleges in Transforming the Medical Curriculum

Emilie H. S. Osborn, Univ of California-San Francisco
Is Organic Chemistry an Obsolete Requirement for Admission to Medical School?

Ronald Breslow, Columbia Univ
Organic Chemistry is a Building Block for Medical Science

The Rights and Wrongs of Cloning Humans

(9:00AM-12:00 NOON; 2:00PM-5:00PM)

Organized by Raymond E. Spier, Univ of Surrey

AM SESSION

MODERATOR: Raymond E. Spier, Univ of Surrey
Ethics and Tools; A Practical Ethics Perspective

SPEAKERS

David Haig, Harvard Univ
The Clones Around Us

Ian Wilmut, Roslin Inst
The Role of Nuclear Transfer in Medicine and Research

Raymond E. Spier, Univ of Surrey
Ethics and Tools: A Practical Ethics Perspective

Ted Friedmann, Univ of California-San Diego
Ethics of Human Cloning

Glen McGee, Univ of Penn
The Parenting of Human Clones Based on the Adoption Model

PM SESSION

SPEAKERS

Lori Andrews, Chicago-Kent Schl of Law
A Legal Perspective on Human Cloning

Ronald Cole-Turner, Pittsburgh Theological Seminary
Cloning Humans from the Perspective of the Christian Churches

Wendy L. McGoodwin, Council for Responsible Genetics
Cloning Humans is Just Not On

Gina Kolata, The New York Times
Involving the Citizenry in the Human Cloning Adventure

Arthur Caplan, Univ of Penn
Does the Cloning of Humans Have a Future?

Gene Movement: Introgression, Genome Analysis, Biotechnology

(2:00PM-5:00PM)

Org by Raymond F. Altevogt, USDA; Andrew H. Paterson, Texas A&M Univ

SPEAKERS

J. Craig Venter*, Inst for Genomic Resch

Andrew G. Clark, Penn State Univ
Experimental Introgression in Drosophila

Bruno Quebedeaux, Univ of Maryland
Plant Genome Analysis: Introgression, Gene Mapping and Funding Trends

SATURDAY, FEBRUARY 14, 1998

Attention and Attention Deficit

(3:00PM-6:00PM)

Org by James M. Swanson, Univ of California-Irvine; Michael S. Gazzaniga, Univ of California-Davis

SPEAKERS TBA

Disorder in the Court: Silicone Gel Breast Implants and Other Scientific Litigation

(9:00AM-12:00 NOON)

Org by Deborah C. Runkle, AAAS; Bert Black, Hughes & Luce

SPEAKERS

Joseph Sanders, Univ of Houston

Anatomy of Science-Rich Cases: A Legal Perspective

Marcia Angell, New England Journal of Med
Does the System Work? A Critical View

Thomas Henderson
The Role of the Plaintiffs' Bar in American Jurisprudence

Linda Rosenstock*, Natl Inst for Occupational Safety and Health-US Dept of Health and Human Serv

Complex Science in the Court: A Scientist's Perspective

Joe S. Cecil, Fed Judicial Ctr
Can the System be Improved? Use of Experts' Panels

DISCUSSANT: Bert Black, Hughes & Luce

Divided Loyalties? Health Care Professionals in the Old and New South Africa

(3:00PM-6:00PM)

Org by Robert S. Lawrence, Johns Hopkins Univ; Patrick Ball, AAAS

SPEAKERS

Dumo Baqwa, Univ of Cape Town
Ongoing Human Rights Problems in the Health Care Sector

Robert S. Lawrence, Johns Hopkins Univ
Divided Loyalties? Health Care Professionals in the Old and New South Africa

Leonard S. Rubinstein, Physicians for Human Rights
The Search for Accountability in South Africa

Marian Gray Secundy, Howard Univ
Building a Human Rights Culture in the South African Medical Profession

DISCUSSANT: Audrey R. Chapman, AAAS

Gene-Diet Interactions in Coronary Heart Disease

(9:00AM-12:00 NOON)

Org by Ronald M. Krauss, Univ of California-Berkeley and Amer Heart Assoc

SPEAKERS

Jan L. Breslow, Rockefeller Univ
Genes-Diet Modifiers of Atherosclerosis in the apo E Knockout Mouse

Claude Bouchard, Laval Univ
Genetics of the Response to Overfeeding and of Obesity

Ronald M. Krauss, Lawrence-Berkeley Natl Lab
Genetic Factors Influencing Cholesterol Response to Diet

M. René Malinow, Oregon Regional Primate Resch Ctr
Homeocyst(e)ine and Cardiovascular Disease

SUNDAY, FEBRUARY 15, 1998

Bioengineering

(3:00PM-6:00PM)

Org by Robert M. Nerem, Georgia Inst of Tech

SPEAKERS TBA

The Epigenetic Approach to Language Development

(9:00AM-12:00 NOON)

Org by Peter MacNeilage, Univ of Texas-Austin; Michael S. Gazzaniga, Univ of California-Davis

SPEAKERS

John L. Locke, Univ of Sheffield
The Path to Spoken Language: Development of Personal Voice

Barbara Davis and Peter MacNeilage, Univ of Texas-Austin
How Infants Learn to Speak Words: The Frame/Content Perspective

Brian MacWhinney, Carnegie Mellon Univ
An Emergentist View of Grammatical Development

(* = Invited, not yet confirmed)

Jeff Elman, Univ of California-San Diego
*Rethinking Innateness:
A Connectionist Perspective*

MONDAY, FEBRUARY 16, 1998

Integrative Biomedicine: An Analysis of Common Mechanisms in Major Chronic Debilitating Diseases of Man

(3:00PM-6:00PM)

Org by Robert J. Genco, SUNY-Buffalo
SPEAKERS TBA

TUESDAY, FEBRUARY 17, 1998

Alternate Mechanisms for Motor and Visuospatial Cognition: Stone-Age to Present

(12:30PM-3:30PM)

Org by Anneliese A. Pontius, Harvard Univ-Schl of Med
SPEAKERS

Valerie B. Domesick
Subcortical Circuits Involved in Cognitive, Spatial, and Motor Processing

Anneliese A. Pontius, Harvard Univ-Schl of Med
Spatial Test Performances By Stone Age Peoples Implicate Preferential Subcortical Processing

Barbara J. Knowlton, UCLA
Habit Learning Mediated By the Subcortical Basal Ganglia

Martin F. Gardiner, Brown Univ
Childrens' Training in Arts and Music Implicitly Improves Cognitive Functioning

Michael L. Commons, Harvard Univ-Schl of Med
Early Implicit Learning without Full Cortical Participation in Various Cultures

International Perspectives on Biotechnology and the Public
(8:00AM-11:00AM)

Org by Edna F. Einsiedel, Univ of Calgary
SPEAKERS TBA

New Standards for the Design of Clinical Trials
(8:00AM-11:00AM)

Org by Nancy Flournoy, American Univ; William F. Rosenberger, Univ of Maryland
SPEAKERS

Douglas Faries, Eli Lilly and Co
Adaptive Designs: Innovative Approaches for Phase II/III Clinical Trials

Christopher R. Palmer, Univ of Cambridge
Why Modern Clinical Trials Designs Should be Used More Often
Nancy Flournoy, American Univ
New Approaches to Early Phase Clinical Trials

DISCUSSANT: Robert T. O'Neill*, US FDA
Innovation and Regulation

Patients, Payers, and Protocols: Heart Replacement Devices Entering Clinical Practice
(8:00AM-11:00AM)

Org by Alan J. Snyder, Penn State Univ
SPEAKERS

Wayne E. Richenbacher, Univ of Iowa Hosps and Clinics
Which Patients Benefit from Mechanical Circulatory Support?

David J. Farrar, Thoratec Laboratories Corp
Pulsatile Blood Pumps

Harvey Borovetz, Univ of Pittsburgh
Rotary Blood Pumps

Roger W. Evans, Mayo Clinic
The Economics of Heart Replacement Devices

Alan J. Snyder, Penn State Univ
A Brief History of Prosthetic Blood Pumps

Properties of Mind
(8:00AM-11:00AM)

Org by Michael S. Gazzaniga, Univ of California-Davis
SPEAKERS

Richard Andersen, California Inst of Tech
Spatial Awareness and Action Planning in the Posterior Parietal Cortex

Marlene Behrmann, Carnegie Mellon Univ
High-Level Vision and the Brain: Insights from Neuropsychology

Gregory McCarthy, Yale Univ-Schl of Med
Human Brain Activation During Perception and Cognition

Steven Pinker, MIT
How the Mind Works

Sunscreen and Skin Cancer: What's Happening
(12:30PM-3:30PM)

Org by Francis P. Gasparro, Thomas Jefferson Univ; Frederick Urbach, Temple Univ-Med Practices
SPEAKERS

Marianne Berwick, Memorial Sloan-Kettering Cancer Ctr
Sunscreens and Skin Cancer: The Epidemiologic Evidence

Richard B. Setlow, Brookhaven Natl Lab
The Wavelengths in Sunlight that are Deleterious to Human Skin

John S. Knowland, Univ of Oxford
Illuminated Sunscreens and DNA Damage

Hans Gonzenbach, Roche Vitamins and Fine Chem
How Do Sunscreens Deal With Photons?

Jouni Uitto, Thomas Jefferson Univ
Molecular Assays for Solar Effects in Skin

May also be of interest ...

Bound to Speak..., SOC pg 21
Controlling Cell Death, SCI pg 20
Development in a Volatile..., ENV pg 10
Environmental Chemicals as..., ENV pg 9
Ethical, Legal, and Social Implications of..., POL pg 18
From Print to Electronic..., COM pg 5
Fueling the "Light of Science"..., POL pg 18
Gene Therapy..., SCI pg 19
HIV/AIDS..., SCI pg 20
How Mechanical Forces are..., SCI pg 19
Human Gene Patents..., POL pg 18
Manipulating and Probing Single..., SCI pg 19

Neurobiology..., SCI pg 19
Novel Therapies..., SCI pg 19
Preparing for a New Century..., ENV pg 9
Social Security in NAFTA..., POL pg 19
The Biological Basis for..., SOC pg 21
The Computer Will See You..., COM pg 5
The Future of Forensic DNA..., POL pg 19
Thermodynamics..., PHY pg 16
Tolerance, Chimerism, and Disease..., SCI pg 19



**PHYSICAL SCIENCES
AND MATHEMATICS**

FRIDAY, FEBRUARY 13, 1998

Excitement in Space: New Studies of the Solar System
(9:00AM-12:00 NOON)

Org by Jay M. Pasachoff, Williams College
SPEAKERS TBA

Exploring New Frontiers in Geometry: In the World Around Us and in Our Classrooms
(9:00AM-12:00 NOON; 2:00PM-5:00PM)

Org by Colm Mulcahy, Spelman College; David W. Henderson, Cornell Univ
AM SESSION:
Geometry is Alive!
SPEAKERS
Carolyn Gordon, Dartmouth College
Can You Hear the Shape of a Drum
Herbert Edelsbrunner, Univ of Illinois-Urbana-Champaign
Computing Organic Shapes on a Micro and a Macro Scale
Walter Whiteley, York Univ
Old Questions - New Answers: Geometry for Computer-Aided Design
Delle Maxwell, Silicon Graphics, Inc
Sharing the Mind's Eye: Computer Animation in Visualizing Geometry

(* = Invited, not yet confirmed)

Jeffrey Weeks
The Shape of Space

PM SESSION:
Long Live Geometry!

SPEAKERS
Joseph Malkevitch, York
College-CUNY
*New Geometry Helps Emerging
Technologies from Robotics to High
Definition Television*

James King, Univ. of Washington
*Working with Teachers to Change
Geometry in the Schools*

John H. Conway, Princeton Univ
The Wonders of Triangle Geometry

David W. Henderson, Cornell
Univ
*Opening Students' Minds:
Experiencing Non-Axiomatic
Geometry in the Classroom*

Colm Mulcahy, Spellman College
*Exploring Frontiers in Geometry:
Looking Back and Looking Forward*

Galaxies in Collision (2:00PM-5:00PM)

Org by Donat G. Wentzel,
Univ of Maryland

SPEAKERS
Rosemary F. G. Wyse, Johns
Hopkins Univ
*The Invasion of the Milky Way
Galaxy*

Bradley Whitmore, Space
Telescope Sci Inst
*The Formation of Star Clusters in
Merging Galaxies*

Chris Mihos, Johns Hopkins Univ
*Supercomputer Simulations of
Colliding Galaxies: Mergers,
Starbursts, and Galaxy Evolution*

Mark Dickinson, Johns Hopkins
Univ and Space Telescope Sci Inst
*Elliptical Galaxy Evolution in
Distant Clusters and the Hubble
Deep Field*

SATURDAY, FEBRUARY 14, 1998

Exploring the Frontiers of Microscopy Scanning Technologies (3:00PM-6:00)

Org by Saul Krasner, US Coast
Guard Academy; Ed Wolf, Natl
Sci Fnd

(* = Invited, not yet confirmed)

SPEAKER
Michael F. Crommie, Boston
Univ
*Using Scanning Tunneling
Microscopy to Explore and Modify
Atomic Terrains*

John R. Kirtley, IBM
*Scanning SQUID Microscopy:
Imaging Single and Fractional
Flux Quanta*

E. Dan Dahlberg, Univ of
Minnesota
*Micromagnetics and Magnetic
Force Microscopy*

Frontiers of the Physical Sciences (9:00AM-12:00 NOON; 3:00PM- 6:00PM)

Org by Warren Page, NYC
Tech College-CUNY

AM SPEAKERS
Jean E. Taylor, Rutgers Univ
*From Soap Bubbles to Turbine
Blades: Applications of Geometric
Measure Theory*

Antonio J. Busalacchi, NASA-
Goddard Space Flight Ctr
*El Nino: Impacts, Predictability,
and Implications on North
America's Climate*

Kamesh Lulla, NASA-Johnson
Space Ctr
*Ultimate Field Trips: Building
Blocks of the Global Geography
Machine*

PM SPEAKERS
Charles H. Townes, Univ of
California-Berkeley
*New Advances in Infrared
Astronomy*

Michael F. A'Hearn, Univ of
Maryland
Comet Hale-Bopp

Jonathan L. Sessler, Univ of
Texas-Austin
*Texaphyrin: A New Approach to
Anticancer Drug Treatment*

New Frontiers in the Sun- Earth Connection (9:00AM-12:00 NOON)

Org by Sallie Baliunas,
Harvard-Smithsonian Ctr for
Astrophysics; Willie Soon,
Harvard-Smithsonian Ctr for
Astrophysics; Edward F.
Guinan, Villanova Univ

SPEAKERS
Peter A. Fox, Natl Ctr for
Atmospheric Resch
*Empirical Estimates of the Sun's
Spectral Radiative Output*
Warren B. White, Scripps Inst of
Oceanography and Univ of
California-San Diego
*Response of Global Upper Ocean
Temperature to Changing Solar
Irradiance*

Harry van Loon, Natl Ctr for
Atmospheric Resch
*The Global Effect in the
Stratosphere of the Solar Cycle*

Joanna D. Haigh, Imperial
College of Sci
*The Effects of Changes in Solar
Ultra-Violet Emission on Climate*

Brian A. Tinsley, Univ of Texas-
Dallas
*Solar Wind Connections to
Climate: Atmospheric Electricity
Affecting Cloud Microphysics*
DISCUSSANT: Eric S.
Posmentier, Long Island Univ
*A Nonlinear Dynamics Perspective
on the Sun-Climate Connection*

Paradigms for the Sciences: Past, Present, and Future (9:00AM-12:00 NOON; 3:00PM- 6:00PM)

Org by Silvan S. Schweber,
Brandeis Univ

AM SESSION
CHAIR: Kathryn M. Olesko,
Georgetown Univ
SPEAKERS
I. Bernard Cohen, Harvard Univ
The Future as Seen from the Past

Dudley Herschbach, Harvard
Univ
Where We Are

Frank Wilczek, Inst for Adv Study
Intimations of the Future

PM SESSION
CHAIR: Paul Forman,
Smithsonian Inst
SPEAKERS

Norton Wise, Princeton Univ
The Physical Sciences

John Beatty, Univ of Minnesota
The Biological Sciences

Joan Richards, Brown Univ
*Changing Terms of Mathematical
Demonstrations: The Natural, the
Rigorous and the Flexible*

Michael E. Fisher, Univ of
Maryland-College Park
*The History of Philosophy of
Science: One Scientist's Perspective*

SUNDAY, FEBRUARY 15, 1998

Challenges for the Chemical Sciences in the 21st Century (9:00AM-12:00 NOON; 3:00PM- 6:00PM)

Org by Allen J. Bard, Univ of
Texas-Austin; Douglas J. Raber,
Natl Resch Council, Natl
Academy of Sci

AM SESSION:
*Blue Sky, Fundamental Science -
"Where Can We Go?"*

SPEAKERS
Doug Lauffenberger, MIT
Biomedical Applications
Stuart Schreiber, Harvard Univ
Biological Receptors

George Whitesides, Harvard
Univ
Materials/Self Assembly

Mark Davis, Cal Inst of Tech
Host-Guest Complexes/Zeolites

Richard Smalley, Rice Univ
Nanomaterials, Nanotubes

PM SESSION
SPEAKERS
F. Sherwood Rowland, Univ of
California-Irvine
*Atmospheric Chemistry/Ozone
Depletion*

Lura Powell, National Inst of
Standards and Tech
Technology Issues

Ed Wasserman, Dupont Co
Industrial Chemistry

Christine Sloane, General
Motors
Automotive Research Catalysis

How Astronomy Expanded into Astrophysics (9:00AM-12:00 NOON)

Org by Donat G. Wentzel,
Univ of Maryland

SPEAKERS

Virginia Trimble, Univ of California-Irvine and Univ of Maryland

How Physics Came to Visit and Tried to Take Over

David H. DeVorkin, Smithsonian Inst

Building a Society and an Image: The Naming of the American Astronomical Society

Saeqa Dil Vrtilek, Harvard Univ and Smithsonian Astrophysical Observatory

New Eyes on the Universe: The Revolution in Modern Astronomy

Bruce Partridge, Haverford College

New Views of the Cosmos During the 20th Century

MONDAY, FEBRUARY 16, 1998

Astrostatistics

(3:00PM-6:00PM)

Org by G. J. Babu, Penn State Univ; Eric Feigelson, Penn State Univ

SPEAKERS

G. J. Babu and Eric Feigelson, Penn State Univ

The Re-Emerging Field of Astrostatistics

Philip B. Stark, Univ of California-Berkeley

Sounding the Sun: Helioseismology

Alexander S. Szalay, Johns Hopkins Univ

Statistics and Observational Cosmology

Riemann to Strings: The Ongoing Romance between Geometry and Physics

(3:00PM-6:00PM)

Org by Robert Osserman, Stanford Univ and Math Sci Resch Inst

SPEAKERS

Robert Osserman, Stanford Univ and Math Sci Resch Inst

Riemann's Remarkable Vision

Jerry Kazdan, Univ of Penn

Local and Global Aspects of Geometry

David R. Morrison, Duke Univ

The Small-Scale Structure of Spacetime

I. M. Singer, MIT

Edward Witten, Inst for Advanced Study

Magic, Mystery, and Matrix

Thermodynamics and Information Theory in Biology

(3:00PM-6:00PM)

Org by Thomas D. Schneider, Natl Cancer Inst; Georgi P. Gladyshev, Academy of Creative Endeavors

Information Theory in Ecology

SPEAKERS

Robert E. Ulanowicz, Univ of Maryland

Information Theory in Ecology

James R. Lepock, Univ of Waterloo

Supramolecular Thermodynamics

Georgi P. Gladyshev, Academy of Creative Endeavors

Thermodynamics of Aging

Peter K. Rogan, Allegheny Univ of the Health Sci

Information Theory in Clinical Diagnosis

Thomas D. Schneider, Natl Cancer Inst

Information Theory in Molecular Recognition

TUESDAY, FEBRUARY 17, 1998

Atmospheric Electricity: The Legacy of Benjamin Franklin

(12:30PM-3:30PM)

Org by Barbara Goss Levi, Physics Today; E. Philip Krider, Univ of Arizona

SPEAKERS

I. Bernard Cohen, Harvard Univ

Benjamin Franklin's Scientific Legacy

E. Philip Krider, Univ of Arizona

Lightning Protection: Did Franklin's Work Stand the Test of Time?

David Sentman, Univ of Alaska

Red Sprites and Blue Jets

Earle R. Williams, MIT

The Global Electrical Circuit

Comparing Apples and Oranges: Scientific Issues in Making Comparisons

(8:00AM-11:00AM)

Org by Juliet P. Shaffer, Edu Test Serv; Howard Wainer, Edu Test Serv

Comparing Chess Players

SPEAKERS

Howard Wainer, Edu Test Serv

Comparing the Incomparable: Big Assumptions and Scant Evidence

Mark E. Glickman, Boston Univ

How Do We Identify Good and Bad Hospitals?

Stephen W. Randenbush, Michigan State Univ

Statistical Inference in Educational Accountability

Juliet P. Shaffer, Edu Test Serv

Common Issues in Making Comparisons

Elementary Methods in Number Theory

(8:00AM-11:00AM)

Org by Melvyn B. Nathanson, Lehman College and CUNY

Elementary Methods in Number Theory

Wavelets: The Latest Big Splash in Science, Engineering, Imaging, and Graphics

(8:00AM-11:00AM)

Org by Colm Mulcahy, Spellman College; Farid Dowla, Lawrence Livermore Natl Lab

Wavelets: The Latest Big Splash in Science, Engineering, Imaging, and Graphics

SPEAKERS

Gilbert Strang, MIT

An Introduction to Wavelets

Björn Jawerth, Univ of South Carolina

Let Your Wavelets Do the Walking: An Introduction to Imaging and Information Access

Farid Dowla, Lawrence Livermore Natl Lab

The Wavelet Transform: The Natural Algorithm in Seismic Signal Analysis

Dennis M. Healy, Defense Adv Resch Projects Agency-US DOD and Dartmouth College

Adapted Wavelets in Medicine and Biology: Examples from Imaging, Signal Processing, and Molecular Structure Computations

May also be of interest ...

Environmental Remote Sensing..., ENV pg 10

Fueling the "Light of Science"..., POL pg 18

How "Chaos" Causes Some..., POL pg 18

How Scientists Really Think..., EDU pg 6

Manipulating and Probing Single..., SCI pg 19

New Frontiers in Electrochemical and..., IND pg 11

Planning for Mars Sample Return..., ENV pg 9

Science for the Naked Eye or..., EDU pg 7

Should Organic Chemistry be Eliminated..., MED pg 13

The Future of Fusion Energy..., IND pg 12

The Global Positioning System ..., ENV pg 9

The Role of Models..., COM pg 6

Understanding US Math and..., EDU pg 7



POLICY AND ECONOMICS

FRIDAY, FEBRUARY 13, 1998

ENTRY POINT: Science and Technology Internships for Students with Disabilities

(2:00PM-5:00PM)

Org by Virginia Stern, AAAS; Jean Morrell, IBM

SPEAKERS

Mildred E. DesBiens, IBM

Dillard Menchan*, NASA-Goddard Space Flight Ctr

Paul Hearne*, The Dole Fnd

Sheryl Burgstahler, Univ of Washington

Entry Point

Impact of Deregulation of the Utilities Industry on Research and Development

(2:00PM-5:00PM)

Org by Henry Lee, Harvard Univ

Impact of Deregulation of the Utilities Industry on Research and Development

(* = Invited, not yet confirmed)

Implications of Changing Affirmative Action Policies (9:00AM-12:00 NOON)

Org by Catherine Morrison,
NY Academy of Sci
SPEAKERS TBA

Misconduct in Science: A Decade of Progress or Years of Controversy? (2:00PM-5:00PM)

Org by Alicia K. Dustria, Ofc of
Resch Integrity; Barbara
Mishkin, Hogan and Hartson
SPEAKERS

Nicholas H. Steneck, Univ of
Michigan
*What Has and What Has Not
Been Accomplished?*

Sybil Francis, Exec Ofc of the
President
*Do We Need a Common
Definition?*

Samuel S. Crocker, Baylor
College of Med
How Complicated Can It Get?

James S. Lubalin, Resch
Triangle Inst
*The Fallout: What Happened to
Whistleblowers and the Accused?*

Barbara Mishkin, Hogan and
Hartson
Where Do We Go From Here?

Toward Public Accountability of Federally Funded Research and Development (2:00PM-5:00PM)

Org by Nicole Ballenger,
USDA; William B. Lacy,
Cornell Univ

MODERATOR: Ron Phillips,
Univ of Minnesota and USDA
SPEAKERS

Robin Nazzaro, Gen Acctg Ofc
Government Performance and
Results Act: *Implications for
Federal Agencies and Universities*

Susan E. Cozzens, Rensselaer
Polytech Inst
*Are We Achieving Accountability?
Observations From Federal
Science Agencies*

Howard Gobstein, Michigan
State Univ

*A University Perspective on
Measuring and Achieving Public
Accountability*

Richard E. Sclove, The Loka Inst
*Citizen Participation in Research
and Development Priority Setting*

Philip G. Pardey, Intl Food Pol
Resch Inst
*Accounting for the Benefits of
Policy-Oriented Social Science
Research*

Anne C. Petersen, W. K. Kellogg
Fnd
*Accountability for Publicly Funded
Research and Development: Is
there a Science Base?*

SATURDAY, FEBRUARY 14, 1998

Evolving Expectations for Scholarship and Accountability in University Programs (3:00PM-6:00PM)

Org by C. Eugene Allen, Univ
of Minnesota; C. J. Weiser,
Oregon State Univ
SPEAKERS

C. Eugene Allen, Univ of
Minnesota
*Research University Program
Accountability to Society*

C. J. Weiser, Oregon State Univ
Rethinking Scholarship

Charles Glassick, Carnegie Fnd
for the Advmt of Teach
Measuring the Quality of Scholarship

Lee S. Shulman*, Carnegie Fnd
for Advmt of Teach
*Teaching and Learning at the
Research University*

James C. Votruba, Northern
Kentucky Univ
*The Research-Outreach Linkage to
Society*

Manipulation of Science by Vested Interests: Money and Power versus Public Health (3:00PM-6:00PM)

Org by Esther M. Sternberg,
Natl Inst of Mental Health-NIH;
Jan-Ake Gustafsson, Karolinska
Inst; Floyd E. Bloom, Scripps
Resch Inst and AAAS

SPEAKERS

Gilbert S. Omenn, Univ of
Washington
*Messenger Under Attack:
Intimidation of Researchers by
Special Interest Groups*

Victor DeNoble, Amer Lung
Assoc
*The Tobacco Industry and Science:
Extinguished Research*

JoAnn Burkholder, North
Carolina State Univ
*Pfiesteria-Like Dinoflagellates:
Science That Crosses Economic
and Political Lines*

Drummond Rennie, The
Journal of the Amer Med Assoc
*Blocking of Publication by
Commercial Interests*

Tom Devine, Govmt
Accountability Project
*Whistleblower Protection and the
Scientific Method*

Women in Science (9:00AM-12:00 NOON; 3:00PM- 6:00PM)

Org by Patricia Shaffer, Univ of
San Diego; Helen C. Davies,
Univ of Penn

AM SESSION:
The Last Decades

SPEAKERS
Margaret Rossiter, Cornell Univ
*1970-1998: A Golden Age for
Women in the AAAS?*

Margaret Cavanaugh, Natl Sci
Fnd
*Is Institutional Culture Changing
for Women Chemists in Academe?*

Fay Ajzenberg-Selove, Univ of
Penn
Women in Physics 1971-1998

Rita R. Colwell, Univ of
Maryland
*Significant Role of Women in
Advancing the Revolution in the
Life Sciences*

Lydia Villa-Komaroff,
Northwestern Univ
*The Role of Women in the Biotech
and Pharmaceutical Industries*

PM SESSION:
What Works

SPEAKERS

Sue V. Rosser, Univ of Florida-
Gainesville
*The Relationship Between
Programs for Women in Science
and Women's Studies*

Susan Lindee, Univ of Penn
Recruitment Stories for Little Girls
Lisa Baird, Univ of San Diego
*Educating Young Women in
Science*

Mary Lowe Good, Venture Cap
Invest, LLC
*Women in Science: Future Global
Perspective*

SUNDAY, FEBRUARY 15, 1998

Challenges and Evolving Responses in an Era of International Cooperation in Science and Technology (3:00PM-6:00PM)

Org by Paul Dufour, Univ of
Ottawa; John de la Mothe, Yale
Univ

SPEAKERS
Eugene Skolnikoff*, MIT
*The Transformation of
International Cooperation in
Science and Technology*

Benedicte Callan, Council on
Foreign Relations
*The Globalization of Industrial
Research and Development: Trends
and Responses*

Rodney W. Nichols, NY
Academy of Sci
*Ideals and Realities: Why Does
Research Cooperation Matter?*

Peter Kind, European
Commission
*The Growing Role of International
Policy in Large Science Facilities*

James Mullin
*The Emerging Development
Challenges for International
Science and Technology*

DISCUSSANT: John de la
Mothe, Yale Univ
*New Challenges and Emerging
Responses to Interdependencies*

(* = Invited, not yet confirmed)

**Ethical, Legal, and Social
Implication of the Human
Genome Diversity Project**
(9:00AM-12:00 NOON)

Org by Mark S. Frankel, AAAS;
Alexander Fowler, AAAS

SPEAKERS

Kenneth K. Kidd, Yale Univ
*The Scientific Rationale and Plans
of the HGDP and Expected
Benefits*

Frank Dukepoo, Northern
Arizona Univ
*A Native American Perspective on
the HGDP*

Henry Greely, Stanford Univ
*Ethical Issues in the Proposed
Human Genome Diversity Project*

William J. Schull, Univ of Texas-
Houston
*Sense and Sensitivity in Human
Genome Research*

Charles E. Riggs, Jr., Univ of
Iowa Hosps and Clinics
*The Model Ethical Protocol as a
Guidance Document for IRB
Evaluation*

**Kill All the Mosquitoes or
Cure Malaria?
Communicating Controversy
to Citizens**
(9:00AM-12:00 NOON)

Org by Marcia C. Linn, Univ of
California-Berkeley

SPEAKERS

Rita R. Colwell, Univ of
Maryland
*Malaria: Controlling Mosquito
Breeding, Finding a Cure*

Carole A. Long, Allegheny Univ
of the Health Sci
*Malaria: Can We Develop a
Vaccine?*

Sheila Jasanoff, Cornell Univ
*Panacea or Poison: The Multiple
Identities of ADT*

DISCUSSANTS: Marcia C.
Linn, Univ of California-
Berkeley
*How Do Students Interpret
Scientific Controversy?*

Shirley M. Malcom, AAAS

Floyd E. Bloom, Scripps Resch
Inst and AAAS
*How Can Science and Science
Online Contribute to Science
Learning?*

Audrey B. Champagne, SUNY-
Albany
*Assessing Science Learning in the
Information Age*

MONDAY, FEBRUARY 16, 1998

**Fueling the "Light of
Science": Private
Philanthropy in American
Science**
(3:00PM-6:00PM)

Org by Susan M. Fitzpatrick,
James S. McDonnell Fnd

SPEAKERS

Daniel Kevles, California Inst of
Tech
*The Funding of American Science,
1900-2000*

Eric Wanner, Russell Sage Fnd
*Survey of Private Foundation
Programs That Have Been
Instrumental in Nurturing and
Developing New Scientific
Disciplines*

John T. Bruer, James S.
McDonnell Fnd
*What the Future Holds - Why
American Philanthropy and
American Science Need Each
Other*

**How "Chaos" Causes Some
Mysteries in Economics and
Political Science**
(3:00PM-6:00PM)

Org by Donald G. Saari,
Northwestern Univ

SPEAKERS

Donald G. Saari, Northwestern
Univ
*What is Chaos? Effects on
Economics and Voting*

Carl P. Simon, Univ of
Michigan-Ann Arbor
*The Effects of Chaotic Dynamics in
Economics*

Monica Tataru, Northwestern
Univ
*With Agendas, Anything Can
Happen*

**Human Gene Patents: Who
Owns Them? Who Deserves
Them?**
(3:00PM-6:00PM)

Org by Robert M. Cook-
Deegan, Natl Cancer Pol
Board, Natl Academy of Sci;
Stephen McCormack,
Georgetown Univ

SPEAKERS
Randy Scott, Incyte Pharm Inc
Why We Need Gene Patents

C. Thomas Caskey, Merck
Pharm
*Why Patent Rights on Genes Need
to be Circumscribed*

DISCUSSANTS: Rebecca
Eisenberg, Univ of Michigan-
Law Schl; Clarisa Long, Amer
Enterprise Inst; Allen Buchanan,
Univ of Wisconsin

**Promoting Scientific
Freedom and Responsibility:
If Not Tenure, Then What?**
(3:00PM-6:00PM)

Org by C. K. Gunsalus, Univ of
Illinois-Champaign-Urbana;
Mark S. Frankel, AAAS

SPEAKERS

Frank A. Franz, Univ of
Alabama-Huntsville
Tenure: Past and Future

R. Eugene Rice, Amer Assoc for
Higher Edu
*Rethinking Tenure: Options &
Alternatives*

Mary W. Gray, American Univ
*Tenure, Academic Freedom, and
Accountability*

Howard Schachman, Univ of
California-Berkeley
Tenure and a Career in Science

Jonathan M. Gilligan, Vanderbilt
Univ
*Et In Arcadia Ego: A Memento
Mori for Tenure*

TUESDAY, FEBRUARY 17, 1998

**Postdocs: Defining Our Role,
Shaping Our Future**
(8:00AM-11:00AM)

Org by Carol Berkower, Albert
Einstein College of Med

MODERATOR: Fiona J. Pixley,
Albert Einstein College of Med

SPEAKERS
Catherine D. Gaddy,
Commission on Pros in Sci and
Tech
*A Review of Recent National Data
on Postdocs in the U.S.*

Eliene Augenbraun,
ScienCentral, Inc
*The Changing Environment for
Postdocs*

Patricia Bresnahan, Gladstone
Inst of Virology and
Immunology and Univ of
California-San Francisco
*Perspectives from University of
California-San Francisco Postdocs*

Paula Cohen, Albert Einstein
College of Med
*Purpose and Progress of the
Einstein Postdoctoral Association*

Cheryl Wellington, Univ of
British Columbia
*Finding Identity and Voice:
Perspectives of Canadian
Postdoctoral Fellows*

Clifford Attkisson*, Univ of
California-San Francisco
*Working With Postdocs: An
Administrator's Viewpoint*

**Results of Professional
Society Surveys of
Employment of Recent
Doctorates**
(12:30PM-3:30PM)

Org by Catherine D. Gaddy,
Commission on Pros in Sci
and Tech

SPEAKERS
Jessica Kohout, Amer
Psychological Assoc
*Results of the 1997 Doctorate
Employment Survey for
Psychology*

Eugene Bierly, Amer
Geophysical Union
*Results from 1996 Earth and
Space Sciences Survey:
Ph.D. Employment*

James W. Maxwell, Amer Math
Soc
*Employment Experiences of New
Doctorates in the Mathematical
Sciences*

(* = Invited, not yet confirmed)

Herbert Maisel, Georgetown Univ
Employment of Recent Doctorates in Computer Science

Corinne Marasco, Amer Chem Soc

The New Chemistry Doctorate: Look What They're Saying!

Patrick J. Mulvey, Amer Inst of Physics

Initial Employment of Recent Physics Doctorates

Marsha Lakes Matyas, Amer Physiological Soc

Recent Doctoral Graduates in Physiology: The Postdoctoral Question

Mary Welsh Johnson, Amer Chem Soc

The New Chemistry Doctorate: Class of 1997

Social Security in NAFTA Countries: What if People Stop Dying?

(8:00AM-11:00AM)

Org by Irwin T. Vanderhoof, Soc of Actuaries; Michael Sze, Sze Assoc Ltd

SPEAKERS TBA

The Economic Consequences of Climate Change Impacts on Forests

(8:00AM-11:00AM)

Org by Linda A. Joyce, US Forest Serv-USDA; David Darr, US Forest Serv-USDA

SPEAKERS

John Mills, US Forest Serv-USDA

Projected Impacts on the United States Forest Sector: TAMM-ATLAS-TEM Linkage

Brent Sohngen, Ohio State Univ
Climate-Induced Land Cover and Production Impacts on Timber Markets and Carbon Storage

Xiangming Xiao, The Ecosystems Ctr

Biological Production in Regional Economies: Response to Projected Climates

John Perez-Garcia, Univ of Washington
Economic and Climatic Change Uncertainties in the Global Forest Sector

The Future of Forensic DNA Testing: A Multidisciplinary Examination

(8:30AM-11:30AM)

Org by William Thompson, Univ of California-Irvine

SPEAKERS TBA

May also be of interest ...

AAAS at 150..., HIS pg 10

America's Urban Underclass..., SOC pg 20

Anonymous and Pseudonymous

Communications..., COM pg 6

Comparing Apples and Oranges..., PHY pg 16

Data Selection..., COM pg 5

Disorder in the Court..., MED pg 13

Divided Loyalties?..., MED pg 13

Ecological Consequences of..., ENV pg 10

Emerging Water Management..., ENV pg 10

Environmental Chemicals as..., ENV pg 9

Ethics in Science..., SOC pg 21

Fossil Fuel as the Common..., ENV pg 8

From Print to Electronic..., COM pg 5

Fundamental Research and..., IND pg 11

Future Research Needs..., IND pg 12

Global Shrimp Farming..., ENV pg 8

The Grand Unified eArchive..., COM pg 5

Green Technology..., IND pg 11

Human Dimensions of Global..., ENV pg 8

Communicating Online..., COM pg 6

Institutionalizing and Sustaining..., EDU pg 7

International Perspectives on Biotech..., MED pg 14

Obesity Update..., MED pg 12

Paradigms for the Sciences..., PHY pg 15

Patients, Payers, and Protocols..., MED pg 14

Petroleum: The Past, Present..., IND pg 11

Planning for Mars Sample Return..., ENV pg 9

Priorities, Opinion, Policy..., IND pg 12

The Rights and Wrongs of Cloning..., MED pg 13

Science and Sustainable Development..., ENV pg 9

Science and the Unpleasant..., ENV pg 9

The University-Industry Research..., IND pg 11

Trends and Impact of Global Research..., IND pg 12

Understanding Population Change..., SOC pg 21

What Should be the Priorities for..., IND pg 11



SCIENCE INNOVATION

FRIDAY, FEBRUARY 13, 1998

Gene Therapy

(9:00AM-12:00 NOON; 2:00PM-5:00PM)

Org by James M. Wilson, Univ of Penn-Med Ctr

SPEAKERS TBA

How Mechanical Forces are Sensed, Generated, and Used by Cells

(2:00PM-5:00PM)

Org by Peter Davies, Univ of Penn

SPEAKERS

Donald E. Ingber, Harvard Univ-Schl of Med

Intracellular Tension and Force Transmission

Michael P. Sheetz, Duke Univ-Med Ctr

Molecular Forces of Cell Motility

Peter Davies, Univ of Penn
Spatial Aspects of Hemodynamic Force Transmission in Endothelium

Steven M. Block, Princeton Univ
Intermolecular Forces in Transcription

Manipulating and Probing Single Molecules

(9:00AM-12:00 NOON)

Org by Paul S. Weiss, Penn State Univ

SPEAKERS

Steven Chu, Stanford Univ
Detection Schemes for Single Molecules

Donald M. Eigler, IBM
An Atomic-Scale Perspective of Superconductivity

Mara Prentiss, Harvard Univ
Manipulating Matter with Light

David Bensimon, Laboratoire de Physique Statistique
Measurements of Forces on Single Molecules

Rich Colton, Naval Resch Lab
Single Molecule-Molecule Interactions

SATURDAY, FEBRUARY 14, 1998

Novel Therapies for the 21st Century

(9:00AM-12:00 NOON)

Org by Aaron Shatkin, Rutgers Univ

SPEAKERS TBA

Neurobiology

(9:00AM-12:00 NOON)

Org by Wise Young, Rutgers Univ

SPEAKERS TBA

Tolerance, Chimerism, and Disease Resistance in Xenotransplantation

(3:00PM-6:00PM)

Org by Suzanne T. Ildstad, Allegheny Univ of the Health Sci

SPEAKERS

Jeff Getty, Allegheny Univ of the Health Sci

Kerry Atkinson, Systemix

Jeffery Platt, Duke Univ

Marian Michaels, Univ of Pittsburgh-Schl of Med

SUNDAY, FEBRUARY 15, 1998

**Defense Mechanisms Across
Biological Systems**

(3:00PM-6:00PM)

Org by Ilya Raskin, Rutgers
Univ; Keith Joiner, Yale Univ-
Schl of Med

SPEAKERS TBA

HIV/AIDS

(9:00AM-12:00 NOON; 3:00PM-
6:00PM)

Org by Robert W. Doms, Univ
of Penn

AM SPEAKERS

Robert W. Doms, Univ of Penn
Chemokine Receptors

John P. Moore, Aaron Diamond
AIDS Resch Ctr
*Inhibition of HIV-1 Entry into
CD4+ T-Cells*

Stephen J. O'Brien, Natl Cancer
Inst

*Natural Resistance to HIV
Infection*

Anthony S. Fauci, NIH
*Host Factors in the Pathogenesis of
HIV Disease*

PM SPEAKERS

David Baltimore, MIT
*Where We Stand with Vaccine
Development*

Malcolm Martin, Natl Inst of
Allergy and Infectious Diseases-
NIH
*The Development of Vaccine and
Disease Models for HIV-1*

Alan S. Perelson, Los Alamos
Natl Lab
HIV and T Lymphocyte Dynamics

MONDAY, FEBRUARY 16, 1998

**Biotechnology and
Evolutionary Biology**

(3:00PM-6:00PM)

Org by Thomas Meagher,
Rutgers Univ; Douglas
Futuyama, SUNY-Stony Brook
SPEAKERS TBA

Controlling Cell Death

(3:00PM-6:00PM)

Org by Giovanni Rovera, The
Wistar Inst

SPEAKERS

Donald E. Ingber, Harvard
Univ-Schl of Med

Yuri Lazebnik, Cold Spring
Harbor Lab

*Enemies Within or the
Biochemistry of Apoptosis*

George C. Prendergast, Wistar
Inst

*Myc-Bin1 Signaling Pathway in
Cell Death and Differentiation*

Eileen White, Ctr for Adv
Biotech and Med

*Regulation of Apoptosis by
Oncogenes and Tumor Suppressor
Genes*

May also be of interest ...

Attention and Attention
Deficit..., MED pg 13

Bioengineering..., MED pg 13

Challenges for the Chemical
Sciences in..., PHY pg 15

Development in a Volatile
World..., ENV pg 10

Ethical, Legal, and Social
Implications of..., POL pg 18

Exploring the Frontiers of
Microscopy..., PHY pg 15

From Print to Electronic...,
COM pg 5

Frontiers of the Physical
Sciences, PHY pg 15

Gene-Diet Interactions in...,
MED pg 13

Gene Movement..., MED pg 13
Insights to Pain and Its..., MED
pg 12

New Frontiers in
Electrochemical and..., IND pg
11

New Standards for the Design
of..., MED pg 14

Obesity Update..., MED pg 13
Properties of Mind..., MED pg
14

The Rights and Wrongs of
Cloning..., MED pg 13

Thermodynamics and
Information Theory..., PHY
pg 16



SOCIAL SCIENCE

SATURDAY, FEBRUARY 14, 1998

**Darwinian Perspectives on
the Origin of Language**

(3:00PM-6:00PM)

Org by David F. Armstrong,
Gallaudet Univ; Sherman E.
Wilcox, Univ of New Mexico

SPEAKERS

Kathleen R. Gibson, Univ of
Texas-Houston

*Language Evolution Reflects
Expansion of Multiple
Neurological Processing Areas*

Barbara J. King, College of
William and Mary
*Primate and Language
Origins*

William C. Stokoe, Gallaudet
Univ

Gestures Become Language

E. Sue Savage-Rumbaugh,
Georgia State Univ
Bonobo Communication

Merlin W. Donald, Queen's Univ
*The Domain-General Foundations
of Language Evolution*

Joan L. Bybee, Univ of New
Mexico

The Evolution of Grammar

**Divergence in Linguistic
Evolution: Ebonics and Other
20th Century Developments**

(9:00AM-12:00 NOON)

Org by William Labov, Univ of
Penn

SPEAKERS

Guy Bailey, Univ of Texas-San
Antonio

*A History of Innovation in
African-American English*

John R. Rickford, Stanford Univ
*Issues in the Evolution of African-
American Vernacular English*

Gillian Sankoff, Univ of Penn
*Divergence in Three Pacific
Creoles of Common Origin*

William Labov, Univ of Penn
*The Recent Divergence of North
American Urban Dialects*

**It's Written in Stone: Using
Geologic Records to
Understand the Impact of
Human Activity**

(3:00PM-6:00PM)

Org by Paul R. Bierman, Univ
of Vermont-Burlington; David
Montgomery, Univ of
Washington

SPEAKERS

Roger LeB. Hooke, Univ of
Minnesota and Univ of Maine
*Human Impact on the Landscape:
Changes Through Time*

Paul R. Bierman, Univ of
Vermont-Burlington
*Catastrophic Results of Colonial
Clearcutting: The Evidence is
Below Your Feet*

David Montgomery, Univ of
Washington
*Forest Clearing and Landsliding in
the Pacific Northwest*

Patrick V. Kirch, Univ of
California-Berkeley
*Human Impacts to Polynesian
Ecosystems: The
Geoarchaeological Record*

William Shotyk, Univ of Berne
*12,000 Years of Atmospheric Lead
Deposition*

**The Evolutionary Base of the
Human Family**

(3:00PM-6:00PM)

Org by Roberta B. Holt,
Georgetown Family Ctr
SPEAKERS TBA

SUNDAY, FEBRUARY 15, 1998

**America's Urban Underclass:
Developing Remedies**

(9:00AM-12:00 NOON)

Org by William T. Golden,
Amer Museum of Natural
History; Mary Jo Bane, Harvard
Univ

SPEAKERS TBA

(* = Invited, not yet confirmed)

Ethics in Science: Special Problems in Anthropology and Archaeology
(9:00AM-12:00 NOON)

Org by Merrilee H. Salmon, Univ of Pittsburgh

SPEAKERS

Merrilee H. Salmon, Univ of Pittsburgh
Relativist Ethics and Concern for Human Rights

M. Alison Wylie, Univ of Western Ontario
Science, Conservation, and Stewardship: Evolving Codes of Conduct in Archaeology

Joe Watkins, Univ of Oklahoma
Conflicting Codes: Professional, Ethical, and Legal Obligations in Archaeology

Jeremy A. Sabloff, Univ of Penn
Scientific Research, Museum Collections, and the Rights of Ownership

K. Anne Pyburn, Indiana Univ
Native American Religion versus Archaeological Science: A Pernicious Dichotomy Revisited

Richard R. Wilk
Whose Forest? Whose Land? Whose Ruins? Ethics and Conservation

One Hundred and Fifty Years of Racial Thinking in American Science
(3:00PM-6:00PM)

Org by C. Loring Brace, Univ of Michigan-Ann Arbor
SPEAKERS

C. Loring Brace, Univ of Michigan-Ann Arbor
The Legacy of Samuel George Morton in Thinking About Race

Vernon J. Williams, Jr., Purdue Univ

Franz Boas's Contribution to African American Thinking on Race

Frank Spencer, Queens College-CUNY
Ales Hrdlicka and Links Between European and American Race Views

Eugene Giles, Univ of Illinois-Urbana-Champaign
Earnest Albert Hooton and "Plain Statements" about Race

Jonathan Marks, Univ of California-Berkeley
Recent Advances in Pseudoscience: Folk Heredity Since the 1960's

Leonard Lieberman, Central Michigan Univ
Changing Views Towards the Concept of Race in American Science

Race and Human Evolution
(9:00AM-12:00 NOON)

Org by Milford H. Wolpoff, Univ of Michigan; Rachel Caspari, Univ of Michigan
SPEAKERS

Alan Mann, Univ of Penn
Skulls, Races, and Evolution: Biological Anthropology in 19th Century Philadelphia

Milford H. Wolpoff, Univ of Michigan
Variation in Prehistory: The Issue of Different Species

John H. Moore, Univ of Florida

Ethnogenesis, Race, and Biology

John Hawks, Univ of Michigan
Skeletal Biology, Variation, and Race

John H. Relethford, SUNY-Oneonta
Genetics, Race, and Prehistory

The Biological Basis for Language Acquisition in Human Infants
(3:00PM-6:00PM)

Org by Lila R. Gleitman, Univ of Penn; Elissa Newport, Rochester Univ
SPEAKERS TBA

Understanding Population Change
(9:00AM-12:00 NOON)

Org by Malcolm Potts, Univ of California-Berkeley; Victoria Dompka, AAAS
SPEAKERS

Carl Haub, Population Ref Bureau
A Tale of Two Explosions

James Wood*, Penn State Univ
Natural Human Fertility

Amy Ong Tsui, Univ of North Carolina-Chapel Hill
Success and Failure in International Family Planning

Julia Walsh, Univ of California-Berkeley
Investing in Family Planning

MONDAY, FEBRUARY 16, 1998

Bound to Speak: Universal Grammar in First Language Acquisition
(3:00PM-6:00PM)

Org by Barbara C. Lust, Cornell Univ; Merrill Garrett, Univ of Arizona
SPEAKERS TBA

The First American: A New Perspective
(3:00PM-6:00PM)

Org by Dennis Stanford, Smithsonian Inst
SPEAKERS TBA

May also be of interest ...

Advocating Scientific Literacy..., EDU pg 7

Alternate Mechanisms for Motor and..., MED pg 14

Attention and Attention Deficit, MED pg 13

Comparing Apples and Oranges..., PHY pg 16

Cultural and Social Foundations of..., EDU pg 7

Learning for Success..., EDU pg 7

Ethical, Legal, and Social Implication of..., POL pg 18

Fueling the "Light of Science"..., POL pg 18

Global Shrimp Farming..., ENV pg 8

How Scientists Really Think..., EDU pg 6

Human Dimensions of Global Change..., ENV pg 8

International Perspectives on Biotech..., MED pg 14

Misconduct in Science..., POL pg 17

Patients, Payers, and Protocols..., MED pg 14

Population and Carrying Capacity..., ENV pg 9

Promoting Scientific Freedom and..., POL pg 18
The Epigenetic Approach to..., MED pg 13
The Rights and Wrongs of Cloning..., MED pg 13
The Role of Models..., COM pg 6

Career Development Workshops

Alternative Career Paths: AAAS Fellowship Programs in Science Policy and the Mass Media

Org by Claudia J. Sturges, AAAS; Amie E. King, AAAS

Five Paths to the Science Job Market

Org by Dave Jensen, Search Maters Intl Inc

Interview and Presentation Skills

Org by Alison French, AAAS; Gregory Stokes, AAAS

Managing Your Career: Seven Factors to Mastering Your Work Life

Org by Wendy Yee, AAAS; Nicole Ruediger, AAAS

Next Wave Career Development: What Life Is Really Like in Industry

Org by Nicole Ruediger, AAAS; Wendy Yee, AAAS

Resume Writing

Org by Alison French, AAAS; Gregory Stokes, AAAS

Transitions to New Directions in Scientific Careers

Org by Victoria McGovern, Burroughs-Wellcome Fund

**Science
CAREER FAIR**
February 17, 1998
11:00AM-4:00PM

(* = Invited, not yet confirmed)

SEMINARS

All information is as of 10/2/97. Changes, additions or deletions received after that date will be included in the next printing of this program.

GENOME SEMINAR:

Countdown to 2000 - Medicine

Org by J. Craig Venter, The Inst for Genomic Resch (TIGR) and Barbara Jasny, AAAS
The changes occurring in the practice of medicine as a result of the human genome project are having an immediate impact and will continue to be of critical importance well into the next century. From cancer genetics, to understanding the molecular basis of obesity, to understanding how genes influence behavior, this seminar focuses on issues that touch the general population as well as the specialist. It is co-organized by *Science* magazine, which has published the identification of some of the key disease causing genes, and The Institute for Genomic Research (TIGR), that catapulted the genome project into a new age by their whole-genome sequencing approaches.

A sequence can be used for diagnostics, but in order to really understand how it causes disease it is critical to understand its function. The seminar will include cutting-edge talks on this next step - functional genomics. There will also be talks examining (from the side of basic research and the pharmaceutical industry) the ways in which this understanding can be exploited for the development of the next generation of pharmaceuticals. Ethical and social issues, economic effects, and the views of government representatives will also be explored.

SATURDAY, FEBRUARY 14, 1998

SPEAKERS

J. Craig Venter, TIGR
Current State of Genomic Research

Phil Hieter, * Johns Hopkins Univ Med Schl
Functional Genomics

Dean Hamer, * NCI/NIH
Genetics of Behavior

Jeffrey Friedman, * Rockefeller

(* = Invited, not yet confirmed)

Univ/HHMI
Genetics of Obesity

John Hardy, * Univ of South Florida
Alzheimer's Disease

M. Anne Spence, * Univ of California-Irvine
Population, Genetics/Human Polymorphisms

David Botstein, * Stanford Univ-Schl of Med
Database Privacy

Steve Fodor, Affymetrix
Gene Chips and the Human Genome

SUNDAY, FEBRUARY 15, 1998

SPEAKERS

Richard Klausner, * NICHD/NIH
The Cancer Genome Anatomy Project for Diagnoses

Dagmar Ringe, * Brandeis Univ
Sequence to Structure to Drug Design

Nancy Jenkins, * NCI/NIH
Model Systems and Human Disease

George Poste, * SmithKline Beecham Pharm
Impact on the Pharmaceutical Industry

Raymond Goldberg, * Harvard Univ-Bus Schl
Genomics: Economic Impact

Arthur Caplan, * Univ of Penn
Ethical Considerations

Donna Shalala, * Dept of Health and Human Serv
Government Perspective

The Forum for School Science

The Impact of Technology on Student Learning: Are We Making Progress

MONDAY, FEBRUARY 16, 1998 - 1:00PM-6:00PM

TUESDAY, FEBRUARY 17, 1998 - 9:00AM-5:00PM

Org by Jerry Bell, AAAS; Betty Calinger, AAAS

The 13th AAAS Forum for School Science provides the setting for teachers, administrators, policymakers, and others to explore how the introduction of

technology into the classroom affects student learning. The addition of computers and other technologies to classrooms represents a common theme in U.S. education reform. However, the impact of this effort on student learning is generally considered to have been modest. This result is all the more surprising for having occurred during a period when such technologies have transformed America's offices, factories, and retail businesses. Given the millions of dollars spent on the installation of computers into schools, greater consideration may need to be given to the dynamics of this process and to the long-term effects.

The 1998 Forum will examine the diverse impact of technology upon student learning and the challenges and opportunities it presents to teachers. This 2-day Seminar provides Registrants with the opportunity to hear from leaders in technology and education and to gain practical experience through workshops and panel discussions.

Immediately preceding the formal opening of The Forum will be a series of special plenary lectures presented as part of a special AAAS Leadership Forum. The insights and perspectives of key leaders on science, technology, and the future will be presented. Those invited for this Leadership Forum include, President Bill Clinton, Gro Harlem Brundtland, Norwegian Parliament, and Intel Corporation's Andrew Grove.

The Forum will open with a keynote presentation by David E. Shaw, Chairman of D.E. Shaw & Company, and a member of the President's Committee of Advisors on Science and Technology. Following Dr. Shaw will be presentations by a variety of technology experts, a poster session, and a reception. The second day will include workshops and panels, and will conclude with a discussion about the future of technology and education.

All information is as of 10/2/97. Changes, additions or deletions received after that date will be included in the next printing of this program.

CONFERENCE LOCATIONS

Pennsylvania Convention Center

1101 Arch Street
Philadelphia, PA 19107
Activities include: Concurrent Sessions, Topical Lectures, Seminars, Science Innovation, Poster Sessions, Meeting Registration, Exhibition, Career Fair, and Career Development Workshops.

Philadelphia Marriott Hotel

1201 Market Street
Philadelphia, PA 19107
Activities include: Concurrent Sessions, Topical Lectures, Plenary Lectures, Meeting Headquarters Office, and Resource Room for Disabled Registrants.

ON-SITE REGISTRATION HOURS

Registration for the 1998 AAAS Meeting will be located in the Pennsylvania Convention Center. Please note operational hours below:

Thursday, February 12, 1998
2:00PM - 7:00PM
Friday, February 13, 1998
7:00AM - 7:00PM
Saturday-Monday,
February 14-16, 1998
7:30AM - 5:00PM
Tuesday, February 17, 1998
7:30AM - 12:30PM

EXHIBITION HOURS

The 1998 AAAS Meeting Exhibition will be located in the Pennsylvania Convention Center - Grand Ballroom. Please note operational hours below:

Friday, February 13, 1998
4:30PM - 6:30PM (Opening Night Reception)
Saturday-Sunday,
February 14-15, 1998
10:00AM - 3:00PM
Monday, February 16, 1998
9:00AM - 2:00PM
(9:00AM Free Coffee Break;
10:00AM AAAS Birthday Party)

INTERNET ACCESS CENTER

Multiple stations will be available where attendees can check their email, send email messages to colleagues and surf the net. The Internet Access Center, located in the Exhibit Hall, will be open during exhibition hours.

HOTEL DESCRIPTIONS

Philadelphia Marriott Hotel:

Connected to the Pennsylvania Convention Center, the Marriott is the newest hotel in Philadelphia. The hotel is just four blocks from Independence Mall, and the Academy of Music, and within walking distance of all museums. This 1200-room hotel places visitors in the center of one of America's most historical and cultural areas. In addition, the hotel has three great restaurants offering a menu for any guest's taste. Facilities include indoor lap pool, exercise room, aerobics room, whirlpool and sauna. As the headquarters hotel for the 1998 AAAS Meeting, the Marriott will be the site of many conference activities.

Wyndham Franklin Plaza Hotel:

The Wyndham is just four blocks from the Pennsylvania Convention Center and convenient to an array of restaurants, theaters, museums, shopping, and sporting events. Located in the heart of downtown Philadelphia, just steps away from the historic Benjamin Franklin Parkway, the Wyndham Franklin Plaza puts you within walking distance of America's historical landmarks, including Independence Hall and the Franklin Institute. All rooms offer new 25" color televisions, complimentary in-room coffee makers and coffee, hair dryers, irons, and ironing boards. Amenities include concierge service, room service, a private health club, two restaurants and lobby bar.

DoubleTree Hotel:

Conveniently located on the Avenue of the Arts, the Doubletree is within walking distance of the Pennsylvania Convention Center. In the heart of Philadelphia's business, entertainment and cultural districts, this magnificent highrise features 425 beautifully appointed guest rooms and suites, The Academy Café and Jack's Center City Tavern. The health club features an indoor swimming pool, two racquetball courts, a roof garden with a jogging track, whirlpool, saunas and steamrooms.

Warwick Hotel:

Eight blocks from the Pennsylvania Convention Center, this gracious historic landmark hotel with 200 recently refurbished, elegantly appointed rooms and suites. Offering personalized attention with concierge service, room service, local cable TV (CNN, ESPN), pay TV, in-room phone, automatic wake-up calls, voice mail, hair dryers, toiletries, complimentary USA Today, and express checkout. Non-smoking rooms are available. Dining facilities include Mia's Restaurant and Capriccio European Pastry Café. The hotel is located in the best area of center-city Philadelphia, just one block off Rittenhouse Square. Shopping, historical, cultural and business areas are within blocks.

LOCAL TRANSPORTATION

Airport Taxi: Taxis are available from Philadelphia International Airport. The fare from Philadelphia International to downtown Philadelphia is approximately \$20.

SuperShuttle: SuperShuttle operates shuttle service from Philadelphia International Airport to each of the official 1998 AAAS Meeting hotels. The price is \$8.00 for a one-way trip. For more information con-

Continued on page 26

(* = Invited, not yet confirmed)



1998 AAAS Annual Meeting and Science Innovation Exposition

February 12-17, 1998 • Philadelphia, Pennsylvania

ADVANCE REGISTRATION FORM

Advance Deadline: December 15, 1997

I. Registrant Information (Please type or print clearly)

FIRST NAME _____ LAST NAME _____
INSTITUTION _____
ADDRESS _____
CITY _____ STATE/PROV _____ ZIP _____ COUNTRY _____
DAYTIME PHONE NUMBER _____ FAX NUMBER _____
E-MAIL ADDRESS _____
AAAS Membership No. (On your membership card or SCIENCE label): _____ 4-Digit Code from Mailing Label: **S | A** _____

II. Demographic Information

1. What is your PRIMARY discipline (check only one):
☐ Biological/Life Sciences
☐ Medical Sciences
☐ Chemistry
☐ Physical Sciences
☐ Earth/Environmental
☐ Social/Behavioral Sciences
☐ Math/Computer Science/Engineering
☐ Other, please specify: _____
2. Are you working in R & D?
☐ Yes ☐ No
3. Are you involved in purchasing decisions at your work place:
☐ Yes ☐ No
4. What is your role in purchasing (check all that apply):
☐ Purchase
☐ Recommend
☐ Evaluate
☐ Initiate Change
☐ Determine Specifications
5. What products or services do you have an interest in or involvement in purchasing at your work place (check all that apply):
☐ Animals
☐ Apparatus/Supplies
☐ Biological/Chemicals
☐ Computer Hardware
☐ Computer Software
☐ Gov't Agencies/Science Associations
☐ Instrumentation
☐ Journals/Books
6. Approximately when will you make your next purchase:
☐ Within the next 3 months
☐ Within the next 6 months
☐ Within the next 9 months
☐ Within the next 12 months
7. What is the total annual budget that you have involvement in:
☐ Less than \$100,000
☐ \$101,000 - \$300,000
☐ \$301,000 - \$500,000
☐ \$501,000 - \$1 Million

III. Special Needs/Special Rates Verification

- ☐ Check here if you have special needs due to a disability; you will be contacted before the meeting.
- To qualify for student or special* (postdoc, K-12 teacher, retired) registration fee, please complete the appropriate line below:
- ☐ Student, Postdoc, K-12 Teacher Institution Name _____ Institution Phone Number _____
☐ Retired Year of Retirement _____ Year of Birth _____

IV. Advance Registration Fees⁽¹⁾ Please check only ONE in this section. (*Special Registrant = Postdoc, K-12 Teacher, Retired)

	AAAS Member	Non-Member		AAAS Member	Non-Member
A. 1998 Passport: Unlimited access to all sessions including Seminars and Science Innovation			C. Seminars: Entry to one seminar only		
Registrant	<input type="checkbox"/> \$225	<input type="checkbox"/> \$270	<input type="checkbox"/> The Genome Seminar	<input type="checkbox"/> Forum for School Science	
*Special Registrant	<input type="checkbox"/> \$175	<input type="checkbox"/> \$205	All Registrants	<input type="checkbox"/> \$100	<input type="checkbox"/> \$155
Student Registrant	<input type="checkbox"/> \$110	<input type="checkbox"/> \$130	D. One Day Only: Unlimited access for one day only		
Seminars are included in your Passport registration, please indicate the seminar you plan to attend: <input type="checkbox"/> Genome Seminar <input type="checkbox"/> Forum for School Science			Please specify day: <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue		
B. Basic Meeting: Basic sessions only, no seminar, no Science Innovation			All Registrants	<input type="checkbox"/> \$100	<input type="checkbox"/> \$155
Registrant	<input type="checkbox"/> \$195	<input type="checkbox"/> \$235	E. Career Development Program Only: Includes career workshops, job fair, and exhibition hall only		
*Special Registrant	<input type="checkbox"/> \$125	<input type="checkbox"/> \$155	All Registrants	<input type="checkbox"/> \$10	<input type="checkbox"/> \$25
Student Registrant	<input type="checkbox"/> \$35	<input type="checkbox"/> \$55	F. Exhibition Only Pass:	<input type="checkbox"/> \$0	<input type="checkbox"/> \$25

V. AAAS Membership

If you are not a AAAS member, you can join now and take advantage of the discount member registration fees. You will also get a year's subscription (51 issues) to *Science* at the lower 1997 rate. \$58 of dues plus international postage are allocated to *Science*. Canadian rates must include GST (#125488122).

Membership Category (USA): Member ☐ \$105 Postdoc Member ☐ \$82 K-12 Teacher Member ☐ \$82 Retired Member ☐ \$65 Student Member ☐ \$58 Canada add \$55 postage plus 7% GST; all others outside the USA add \$90 to above rates.

VI. Conference Fee Totals

Please add the amounts from the box(es) you checked above in Sections IV and V and write in the total amount due below:

TOTAL AMOUNT ENCLOSED \$ _____

VII. Payment Method⁽²⁾

- ☐ Check Enclosed ☐ Original Purchase Order Enclosed
Credit Card: ☐ VISA ☐ MasterCard ☐ American Express (No other cards accepted)
Credit Card #: _____ Exp. Date: _____
Signature: _____

VIII. How to Register

Fax, phone or mail your registration today.

Fax: (202) 289-4021 (Credit Card payments only.)

Phone: (202) 326-6417 (Credit Card payments only.)

DO NOT mail hard copy if you register via fax or phone.

Mail: AAAS, Meetings Dept., P.O. Box 630285, Baltimore, MD 21263

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

IX. Important Notes:

- (1) Cancellations must be received in writing by January 15, 1998. No refunds will be made for cancellations received after this date. Refunds are subject to a \$25 cancellation charge and will be processed after the meeting.
- (2) Please make check payable to AAAS.

**Deadline: December 15, 1997**

I. Name and Address (Please use a separate sheet for each room requested. You may copy this form).

[illegible]

Room Request: ☐ 1 bed, 1 person ☐ 1 bed, 2 people ☐ 2 beds, 2 people ☐ 2 beds, 3 people ☐ 2 beds, 4 people
Special Request: ☐ Wheelchair accessible room ☐ Non-smoking room ☐ Other, please specify _____
Arrival Date: _____ Arrival Time: _____ ☐ AM ☐ PM Departure Date: _____ Departure Time: _____ ☐ AM ☐ PM

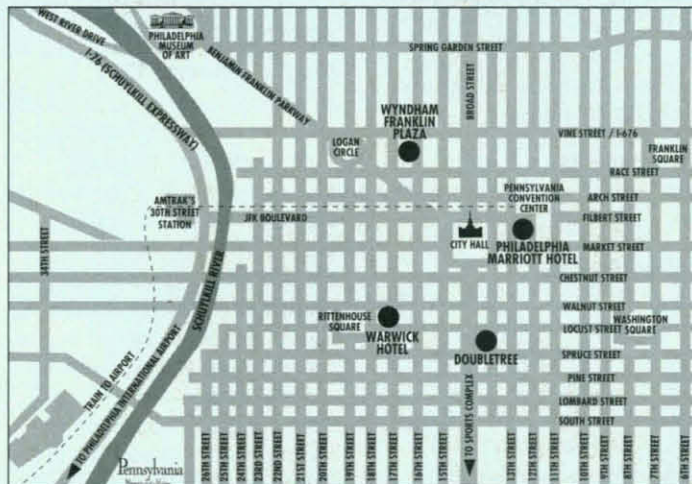
Hotel	Single	Double	Triple	Quad
— Philadelphia Marriott*	\$139 <input type="checkbox"/>	\$159 <input type="checkbox"/>	\$179 <input type="checkbox"/>	\$199 <input type="checkbox"/>
— Wyndham Franklin Plaza	\$129 <input type="checkbox"/>	\$149 <input type="checkbox"/>	\$169 <input type="checkbox"/>	\$189 <input type="checkbox"/>
— Doubletree Philadelphia	\$125 <input type="checkbox"/>	\$135 <input type="checkbox"/>	\$145 <input type="checkbox"/>	\$155 <input type="checkbox"/>
— Warwick	\$138 <input type="checkbox"/>	\$148 <input type="checkbox"/>	\$163 <input type="checkbox"/>	\$178 <input type="checkbox"/>

List full name of each additional room occupant:

1.	LAST NAME	FIRST NAME
2.	LAST NAME	FIRST NAME
3.	LAST NAME	FIRST NAME

*AAAS Headquarters Hotel

All hotel rates are subject to a 13% sales and room tax per night. Room rates include \$3 per night surcharge to help defray the cost of the Pennsylvania Convention Center.



The first night's deposit is required for each reservation. Deposits can be made by credit card or check. If paying your deposit by credit card, complete the information below. Your credit card will be billed immediately. If paying your deposit by check, send your check directly to your assigned hotel after you receive your housing acknowledgment. Your check should be made payable to the hotel.

Please charge the first night's deposit to the following credit card:

- ☐ VISA ☐ MasterCard ☐ American Express
☐ Discover ☐ Diners Club

Credit card number: _____

Expiration Date: _____

Clearly print name of card holder: _____

Authorized signature of card holder: _____

Prior to February 1st, any changes or cancellations must be made through Welcome Philadelphia. After February 1st, you must contact your hotel directly. Cancellations must be received by your hotel no later than 72 hours prior to arrival to ensure refund. Penalties may be imposed for early departures.

Complete all information above. You may submit your completed reservation form to Welcome Philadelphia by phone, fax, or mail. Do **NOT** mail this form to the hotel or to AAAS.

PHONE: 215-977-4452

FAX (In the USA or Canada): 800-977-7733

FAX (Non USA): 215-977-5656

MAIL: AAAS Housing

c/o Welcome Philadelphia

2401 Walnut Street, 6th Floor

Philadelphia, PA 19103-4390 USA

Important: Reservations must be received by 12/15/97
If submitting by mail, please postmark by
12/10/97



tact SuperShuttle at 1-800-246-0770.

Parking: All 1998 AAAS Meeting hotels have on-site parking. Parking rates for hotel guests range from \$13 to \$24 per day.

DISCOUNT AIR/RAIL FARES

Make your travel arrangements today and take advantage of the special discounted fares to the 1998 AAAS Meeting via the official carriers listed below. To obtain these discounts, you must make your reservations in one of the following ways:

- 1) Call BTI Americas, the official travel agency of the 1998 AAAS Meeting, at the number below, and identify yourself as a AAAS Meeting attendee.
- 2) Contact the carrier directly at the appropriate phone number below and provide the appropriate ID#.
- 3) Call your own travel agent, and provide them with the carrier's ID# below.

BTI Americas

Phone: 800-446-6000 or 703-284-5209 (8:30am-8:00pm ET)

United Airlines

Save twice! Get a 5% discount off the lowest applicable discount fare, including First Class, or a 10% discount off mid-week coach fares purchased 7 days in advance. Then get an additional 5% discount if you buy your ticket at least 60 days in advance. Discounts are for round-trip travel to Philadelphia during February 7-22, 1998, on United Airlines, United Express, or Shuttle by United. Some restrictions may apply. Phone: 1-800-521-4041 (7am-midnight ET) ID#: "Meeting ID code 515ZV"

US Airways

Get a 5% discount off First Class or any published promotional round trip fare, or a 10% discount off unrestricted coach fares purchased 7 days in advance. Or get exclusively

(* = Invited, not yet confirmed)

negotiated discount rates on any travel that does not meet the restrictions of the promotional round trip fares. Discounts are for round-trip travel to Philadelphia during February 7-22, 1998, on US Airways, US Airways Express, or US Airways Shuttle. Some restrictions may apply.

Phone: 800-334-8644 (8:00am-9:00pm ET) ID#: "Gold File Number 75670329"

Amtrak

Get a 10% discount on travel to and from the AAAS Annual Meeting. Discount applies to round-trip regular rail fares to Philadelphia (except peak-hour Metroliners) during February 7-22, 1998 and is subject to availability. Phone: 1-800-USA-RAIL (24 hours) ID#: "Fare order X-52E-913"

SPECIAL EVENTS

Public Science Day

Sponsored by Unisys, the 1998 AAAS Public Science Day will bring together thousands of K-8 students (from the Philadelphia area, Los Angeles, and the United Kingdom) and five Philadelphia science facilities. Students will enjoy a full day of special programs, activities, and presentations that emphasize the importance of science and technology in our daily lives. For more information contact Judy Kass at (202) 326-6667.

American Junior Academy of Science (AJAS):

The AJAS Meeting will be held in conjunction with the 1998 AAAS Meeting. Over the course of four days, the AJAS will showcase the work of promising future scientists from across the country. These premier high school students, representing their State Academies, will share their award-winning work in oral and poster sessions. Students will participate in academic, social and cultural events. Events include a presentation by anthropologist, Dr. Janet Monge, evening activities

at the Academy of Natural Science, and informal interaction with senior scientists at the Breakfast with Scientists and the Youth Meets the Masters session. The grand finale includes an Awards Banquet where students will be recognized for their accomplishments. The AJAS is a program of the National Association of Academies of Science (NAAS). For more information contact AJAS Director, Gloria Takahashi at 213-744-3384 or 626-333-2173 (between 9am-7pm Pacific Time).

BARRIER-FREE ENVIRONMENT

Accommodations for people with disabilities are provided upon request at all general lectures and other sessions. Services will include interpreters for the deaf or hearing impaired, audiotaped highlights for the blind or visually impaired, and mobility assistance within and outside the conference facilities as needed. In addition, a resource room for people with disabilities will be available in Room 307 at the Philadelphia Marriott. Please make sure to check the special needs box on the registration form. You will be contacted before the conference.

TOURS

We are working on some specially arranged field trips exclusive to AAAS meeting attendees. Please watch *Scope Online* for details and field trip registration information. For *Scope Online* go to <http://www.aaas.org/meetings/scope>

FOR MORE INFORMATION

Mail: AAAS, Meetings Dept., 1200 New York Avenue NW, Washington, DC 20005
Phone: (202) 326-6450
FAX: (202) 289-4021
Email: confinfo@aaas.org
Web Page: <http://www.aaas.org/meetings/meetings.htm>

EXHIBITOR NAME & BOOTH #

AAALAC International (Association for Assessment and Accreditation of Laboratory Animal Care) **319**
Academia Book Exhibits **502**
The American Anti-Vivisection Society/ The Alternatives Research & Development **116**
American Chemical Society **506**
American Psychological Association **317**
Association of American University Presses **410**
Battelle **201**
BIOMOL Research Laboratories, Inc. **511**
Brock Optical, Inc. **315**
Cold Spring Harbor Laboratory Press **215**
Cornell Theory Center **316**
Department of Energy/Oak Ridge National Laboratory **220**
DOD SBIR/STTR Programs **217**
Dorling Kindersley Family Learning **416**
Dover Publications, Inc. **415**
Ecumenical Roundtable **519**
Garland Publishing **418**
Gordon and Breach/Harwood Academic **420**
Harbor Branch Oceanographic **218**
Harvard University Press **508**
Heldref Publications **605**
Howard Hughes Medical Institute **401**
Hubble Space Telescope Project **324**
InforMax, Inc. **609**
Institute for Scientific Information **422**
International Space Station **407**
Island Press **601**
John Templeton Foundation **515**
MBNA America **611**
Metric Program/National Institute of Standards & Technology **509**
NASA **501**
NASA/EOSDIS **102**
NASA Neurolab Mission **318**
National Institute of Dental Research **216**
National Library of Medicine, Specialized Services Division **512**
National Science & Technology Medals Foundation **212**
National Science Foundation **516**
National Sea College Program **311**
Next Generation Space Telescope **322**
NOAA **321**
Office of Naval Research **209**
Oxford University Press **615**
PHI Enterprises, Inc. **421**
The Planetary Society **603**
The Scientist **424**
Sigma Delta Epsilon, Graduate Women in Science, Inc. **207**
Sigma Xi **112**
Society of Environmental Toxicology and Chemistry (SETAC) **423**
Subaru of America, Inc. **301**
U.S. Department of Energy, Office of Science & Technology **417**
Veterans Affairs Office of Research & Development **211**
Yale University Press **205**

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Call for rate and deadline information on display classified advertisements.

E-mail: science_displayads@aaas.org

Bren Peters
Recruitment Display Advertising
Telephone: (202) 326-6541
FAX: (202) 289-6742
E-mail: science_displayads@aaas.org

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

Debbie Cummings
European Recruitment Advertising
Telephone: +44 (0) 1223 302067
FAX: +44 (0) 1223 576208
E-mail: science@science-int.co.uk

LINE CLASSIFIED ADVERTISEMENTS

How to Submit a Line Classified Ad:

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

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

For line advertising deadlines, call Eric Banks, Telephone: (202) 326-6555; or Troy Benitez, Telephone: (202) 326-6740; FAX: (202) 289-6742. E-mail: science_classifieds@aaas.org

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

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

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

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

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

Full-Page Recruitment Advertisement Directory

Diversity in the Scientific Work Force

The following organizations have placed full-page recruitment advertisements in the special advertising supplement in this issue of SCIENCE.

Advertiser	Page
Organizations	
Argonne National Laboratory	931
Boehringer Ingelheim	919
Bristol-Myers Squibb	921
Eli Lilly	923
Hoechst Marion Roussel	914-915
Howard Hughes Medical Institute	930
Marine Biological Laboratory	928
Memorial Sloan-Kettering Cancer Center	922
Monsanto	916-917
Novartis	929
Pfizer	918
Pioneer Hi-Bred International, Inc.	934
Schering-Plough	925
SmithKline Beecham Pharmaceuticals	924
Wyeth Ayerst	927
Zeneca	933

Start Your Day with **inScight**

Science and **Academic Press** invite you to start your day with **inScight**, the online information service devoted specifically to late-breaking science news.

Located at www.apnet.com/inscight, the site is a free service featuring daily topical news items of interest to researchers, practitioners, students, and anyone with an interest in current science issues. The experienced and preeminent news team of the weekly **Science** compiles and provides **inScight** with the day's primary science news stories which are then formatted and maintained online through the Academic Press electronic production services department.

In addition to providing daily science news, **inScight** features a daily-updated network of links to related newsmakers, associations, and appropriate science subjects. Stories are archived for easy searchable reference. For key word descriptions, the service incorporates the **Academic Press Dictionary of Science and Technology**, a comprehensive reference of more than 130,000 entries.

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A SCIENCE Advertising Supplement

Diversity in the Scientific Workforce

Turn the page

Read about the efforts of
companies and organizations
that are building success
through a diverse work force.

SCIENCE
www.sciencemag.org



Diversity in the Scientific Work Force

by Michael Woods

- Hoechst Marion Roussel
- Abbott Laboratories
- Baxter Healthcare
- Zeneca Pharmaceuticals

“In an increasingly global economy, making full use of all the nation’s human resources is essential to successful international competition, world leadership in science and engineering, and an improved quality of life in the United States. Different perspectives, talents, and experiences produce better ideas and ultimately better goods and services to meet the needs of increasingly diverse markets in the United States and abroad.”

— Neal Lane, director, National Science Foundation

Work force diversity. The quest has enriched scientific workplaces with a remarkable influx of women and underrepresented minorities. The number of women in science careers has increased every year for at least 25 years. Biotechnology and pharmaceutical companies have embraced Neal Lane’s words, in the latest National Science Foundation (NSF) report on women and minorities in science. They compete in diverse global markets. Gaining a competitive edge demands breakthrough science and innovation. People with different life experiences, perspectives, and ways of solving problems can only enhance research creativity.

Clearly, however, the process of translating an industry-wide commitment to diversity into fully diverse work forces is still

underway. Below we glimpse NSF’s most recent statistical picture of diversity in scientific workplaces. Then we move from numbers to the real world and survey diversity efforts at Abbott Laboratories, Baxter Laboratories, Hoechst Marion Roussel, and Zeneca Pharmaceuticals.

We found recognition that increasing workplace diversity requires more women and minorities in the job-applicant pool. Biopharmaceutical companies have embraced a “start-when-they’re-young” philosophy, with a sharp focus on females and minorities. Companies also remain deeply committed to enhancing workplace diversity, despite anti-affirmative action sentiment like California’s Proposition 209.

NSF’s 1996 report found more than 3.2 million Americans holding science and engineering jobs in 1993 (the most recent year with full data). About 750,000 were women and 200,000 were underrepresented minorities—blacks, Hispanics, and American Indians.

Women made up 51 percent of the population, 46 percent of the labor force, but only 22 percent of the scientists and engineers. Underrepresented minorities were 23 percent of the population but only 6 percent of scientists and engineers. Blacks and Hispanics each were about 3 percent. American Indians were less than 1 percent.

Those figures conceal promising trends, especially in the new generation of scientific workers who received degrees since

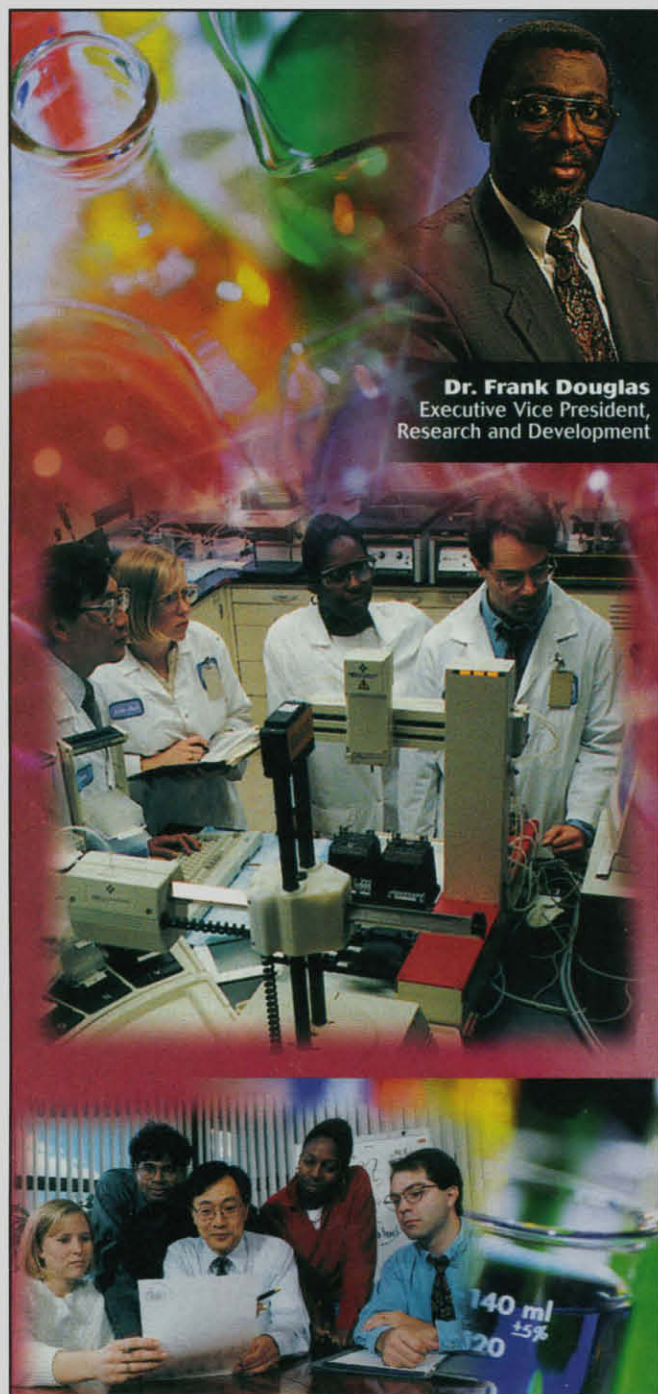
continued ►

Michael Woods writes frequently on the biotechnology and pharmaceutical industries.

Many Unique Elements. One Common Goal.

In the highly complex world of pharmaceutical research and development, it takes the collective ingenuity of an extremely talented and diverse staff to function with success. Hoechst Marion Roussel, an international pharmaceutical company where a multi-cultural work force is a historical legacy, concentrates on the unique specialties of each individual to form a world-class team that strives to attain a common objective. That objective is to be first in converting science into innovative, commercially attractive products in our areas of research focus. As a \$9 billion company and one of the world's industry leaders, we take pride in the recent formation of our U.S. Diversity Council to advise management on ways to embrace and foster diversity. We feel this model of success has not only resulted in the advancement of medicine, but in the professional achievements of all our employees. Hoechst Marion Roussel and you-together we can make a difference.

Hoechst Marion Roussel is now expanding its roster of world-class scientists. The company's U.S.-based, state-of-the-art facilities offer a creative environment and are conveniently located in Bridgewater, New Jersey and Tucson, Arizona. If you are team oriented, and are serious about discovering tomorrow's breakthrough medicines, please review some of the exciting opportunities available today at Hoechst Marion Roussel.



Dr. Frank Douglas
Executive Vice President,
Research and Development

BIOTECHNOLOGY GROUP

Gene Expression Protein Biochemistry/ Protein Expression

Ph.D. in Biochemistry with a minimum of 3 years related experience and demonstrated expertise in the characterization and purification of a variety of proteins is required. The qualified individual will lead efforts directed at converting novel proteins into drug discovery targets. Demonstrated expertise with a variety of protein purification and characterization techniques including ion exchange, size exclusion, reverse phase, affinity chromatography, IEF, Western blotting and the use of FPLC and HPLC systems is essential. In addition, a strong background in bench scale fermentation of bacteria, baculovirus, yeast and mammalian cells, as well as a demonstrated background in molecular biology is desired.

Molecular Biologist/ Genomics

Ph.D. Molecular or Cell Biologist with a minimum of 3 years related experience in the characterization of gene expression patterns is required. Demonstrated expertise with in situ hybridization, in situ PCR, quantitative PCR, and immunocytochemical methods used to characterize mRNA and protein expression levels from mammalian tissue sources is essential. A strong background in molecular and cell biology with experience in cDNA cloning, Southern, Northern and Western blotting is desired. Previous experience with the simultaneous characterization of gene expression pattern for multiple transcripts and the use of chip based methods to study gene expression is highly desirable.

Bioinformatics

Responsible for the conception, design and performance of experiments in bioinformatics to assist in the discovery of new therapeutic approaches including integration of bioinformatics technologies and skills into biotechnology efforts of the company and external alliances, including the identification and validation of targets. Position will also include the application of fundamental or specialized knowledge of sciences to the development of research programs. Ph.D. in Bioinformatics, Biostatistics, Computational Biology or recognized equivalent field with experience

in evaluating and implementing novel algorithms for DNA, genomic and protein analysis including skills in statistical analysis and differential gene expression studies required. Software development and integration skills in a Unix computing environment is essential.

CNS DISEASE GROUP

Head, CNS Molecular Biology

Responsible for leading research efforts within our CNS Disease Group. Ph.D. in Molecular or Cell Biology, broad expertise in CNS-related molecular biology techniques involving cloning, expression in neuronal cell lines and gene discovery. Pharmaceutical R&D experience including background and understanding of genomics in a global environment and a successful record in idea generation and rapid assay development, experience managing, developing and motivating teams, excellent communication and presentation skills. Pharmacology background highly desirable.

CNS in vitro/smart screen

In vitro/smart screen Research Biologist who will develop sophisticated, second-order, in vitro assays based on signal transduction pathways, automate these assays for efficient lead optimization and, where appropriate, transfer the technology for use in lead identification. Responsibilities also include incorporating these systems into the critical path of compound evaluation for CNS discovery programs targeting Alzheimer's disease, schizophrenia, and stroke, and contribute to ongoing lead optimization activities for receptor, enzyme, and ion channel targets and to identify future mechanistic targets in these areas. Ph.D. in Molecular Biology or Cell Biology plus 2 years post-doc or industry experience with signaling pathway assays, and experience translating knowledge into smart screen assays.

CNS Neuroimmunology

Responsibilities include expressing cDNAs in a variety of different cell models, work in the construction of novel expression vectors and models of conditional gene expression, work with genetic databases, and work in multidisciplinary teams. Ph.D. in Molecular Biology or Cell Biology with a minimum of 5 years related experience in the areas as described above, 2 years CNS post doc experience an added plus with the ability to interact and collaborate effectively within a multidisciplinary team.

CORE RESEARCH GROUP

Head, Screening, Profiling and Laboratory Automation

Manages group with responsibilities for HTS validation, library screening, robot maintenance and programming, and associated training of key personnel. Position will also serve on the HMR global screening committee, having responsibility for the timely and efficient use of the small molecule and natural product screening resources within the company. Ph.D. in Biochemistry, Pharmacology or related field with 5 to 7 years experience in assay development and drug discovery, with good interpersonal skills and the ability to coordinate the efforts of a highly skilled team working on multiple diverse projects.

Screening & Profiling

Ph.D. in Biochemistry, Pharmacology, Molecular Biology, or a related field with a minimum of 3 years post doctoral study. Expertise should include automation, validation, running, and developing in vitro receptor or enzyme assays, including kinetic measurements. A critical understanding of the kinetic and mathematical descriptions of these types of assays is highly desirable. The successful candidate will be the key interface between Screening & Profiling and the Disease Groups and must have excellent oral and written communication skills, and the ability to work on multiple projects simultaneously.

Pharmacokinetics and Drug Metabolism

Ph.D. in Biochemistry, Pharmaceutics, or Chemistry with 2-4 years experience in the pharmaceutical industry. The successful candidate will have preclinical pharmacokinetic and metabolism drug discovery research experience in addition to a thorough knowledge of general bioanalytic assays, drug absorption processes, metabolic profiling, and in vitro screening studies.

Electrophysiology

Requires expertise in voltage dependent ion channels, patch clamp technique and cardiac in vitro preparations. Background should also include thorough knowledge of general pharmacology and ability to investigate mechanisms of action and drug interactions and to develop new technologies and models. Ph.D. or equivalent in Physiology, Pharmacology, Biochemistry, or Molecular Biology, a minimum of 2 years experience (post doc preferred, but not required), key competency in electrophysiology with voltage dependent ion channel patch clamp expertise, additional competencies including a knowledge base in cardiac electrophysiology and molecular biology, and skill base with cardiac in vitro preparations (papillary or Purkinje fibers), excellent team and communication skills, and innovation skills with the ability to improve existing systems and processes.

MEDICINAL CHEMISTRY GROUP

Head, Automated Synthesis and New Technologies

Lead a group of technical professionals in the implementation of automated synthesis technology, supporting drug discovery, utilizing state-of-the-art analytical and chromatographic tools. A major focus of this position is to build and maintain expertise in directed library design utilizing solid phase and supported reagent chemistries. Ph.D. in Organic Chemistry with a minimum of 10 years pharmaceutical research experience in synthetic organic chemistry including a minimum of 2 years experience implementing automated parallel synthesis, utilizing both solution and solid phase methods, prior managerial and supervisory experience, and excellent organizational, analytical, interpersonal, group presentation and project leadership skills are required.

Automated Synthesis & New Technologies

Develop new methods of performing organic chemical reactions on solid supports, maintain a robotic synthesis system, and adapt chemical reactions to solid phase conditions, such that they may run in an automated robotic system for automated synthesis. Ph.D. in Organic or Medicinal Chemistry (post doc experience desirable), thorough knowledge of the theory and methodology of solid phase organic synthesis, thorough and comprehensive knowledge of modern analytical and spectral techniques as they relate to solid phase chemistry, and excellent communication, interpersonal and teamwork skills.

RESPIRATORY DISEASE GROUP

Cellular Immunology

Requires specific expertise in manifestations of immune function/dysfunction in asthma. Responsible for contributing to our ongoing Respiratory Disease Group projects in developing small molecules as regulators of the immune response in asthma, and for identifying new targets, concepts, approaches or opportunities for novel therapy of asthma. Ph.D. in Immunology, Cell Biology or Molecular Biology with a minimum of 3 years of related experience (pharmaceutical industry preferred), experience in developing assays for the cellular immunology of T-cells, B-cells, antigen-presenting cells (macrophages and dendritic cells), particularly as they relate to the activation of TH1 and TH2 cells, experience in cytokine-mediated signal transduction pathways, e.g. those leading to immunoglobulin class switching and IgE synthesis, familiarity with in vivo models of allergic bronchial sensitization, provocation and inflammation methods; techniques in immunopathology and immunochemistry are desirable, as is the ability to interact and collaborate effectively within a multidisciplinary team of biochemists, medicinal chemists, pharmacologists and cell biologists.

Bronchopulmonary Pharmacology

In vivo and in vitro bronchopulmonary pharmacologist responsible for the evaluation of small molecules in animal models of neurogenic airway inflammation and asthma. Emphasis will focus on coordinating activities, designing routine and novel experimental protocols and expanding our present drug discovery effort on bronchopulmonary disease (asthma). Ph.D. in Pharmacology, Physiology, Biochemistry, Immunology or related discipline and at least 5 years of related experience in an industrial or academic environment. Required background also in in vivo respiratory pharmacology including isolated tissue bath studies using human and animal tissue, experience in acute and chronic (anesthetized and conscious) animal models of allergic and neurogenic airway inflammation, techniques to measure pulmonary function (mechanics/dynamics), inflammatory cell infiltration in BALF, microvascular permeability (edema), airway hyperactivity and mediators involved. Experience with in vitro methodologies such as immunocytochemistry (FACS, ELISA, etc.), immunohistochemistry and histopathology is highly desirable. Experience with whole body plethysmography for conscious animal and aerosol studies is desirable, along with excellent communication skills and a record of peer-reviewed journal publications.

ONCOLOGY DISEASE GROUP

Tumor Biology

Group leader in collaboration with the Head of Disease Group Oncology, responsible for determining the strategy for efficient drug testing and assessment of drug effects in tumor models by organization and leadership of the Tumor Biology Group. Ph.D. or DVM/Ph.D. in Pharmacology, Pathology or recognized equivalent field, minimum of 8 years experience (pharmaceutical industry experience preferred) in tumor model use for drug testing, including experience with human tumor xenografts in nude and scid mice, working knowledge of tumor pathology, immunohistochemistry, and in situ hybridization. Experience with in vivo models of angiogenesis, tumor model development, and tumor cell culture, is highly desirable as is a published record of accomplishment in drug testing and development and excellent verbal and written communication skills.

Signal Transduction

Group leader responsible for originating Signal Transduction research projects and overseeing the daily performance of the people working on the projects. Ph.D. in Cell Biology, Molecular Biology,

Biochemistry or recognized equivalent, minimum of 4 years pharmaceutical industry experience (beyond post doc), including managerial and supervisory background, experience in either signal transduction targets such as AP-1, JUN, FOS, MAPK pathways, transcription factors or retinoblastoma protein, p53, and other cell cycle targets, significant record of scientific publication, excellent written and verbal communication skills.

COMBINATORIAL CHEMISTRY

(Selectide Corporation, Tucson, AZ)

Biology/Biochemistry

Responsible to develop and implement biological assays for high density automated screening of combinatorial chemical libraries. Manages drug discovery projects, supervises technical associates, and coordinates research activities with internal and external collaborators. Ph.D. in Biology, Biochemistry or recognized equivalent and demonstrated track record of innovation with solid understanding of receptor-ligand and/or enzyme kinetic analysis.

Chemistry Automation

Responsible to initiate, plan and implement automation projects for combinatorial chemistry research laboratory. Supervise associates and coordinate research activities. Ph.D. in Organic/Medicinal Chemistry with complete understanding of scientific issues associated with combinatorial chemistry, parallel synthesis, and related automation.

Attracting and retaining top talent is a high priority at Hoechst Marion Roussel. That is why we offer one of the most outstanding and comprehensive compensation and benefits packages in the pharmaceutical industry. Our total rewards package includes competitive compensation and bonus programs, flexible medical and dental plans, tuition assistance, legal assistance, income protection plans, and unique retirement and savings plans that offer immediate, 100% vesting and portability. Our generous relocation package addresses the transitional needs of our new associates. For consideration, please mail your resume (suitable for scanning), indicating position of interest and including salary/history requirements, to: **Staffing Manager, Human Resources, D103-H, Ref# 1997BW0020, Hoechst Marion Roussel, Inc., Bridgewater, NJ 08807-0800, U.S.A., or e-mail: jobs@hmri.com.** No phone calls please. For additional company information, we invite you to visit our website: www.hmri.com Proud to be an Affirmative Action Employer, M/F/D/V.

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Now that's a challenge. If you are looking to take your skills to a company that's really making a difference, consider Monsanto Life Sciences Company.

We're bringing pharmaceutical products to market that satisfy unmet medical needs. We're strengthening plant resistance to insects and disease, so crops around the world will be stronger. We're developing new food ingredients, so food will taste better, and will be better for you.

And this is just the beginning.

You see, at Monsanto, our team of professionals come from all walks of life. And these unique perspectives enable them to develop new solutions and fresh ideas. After all, they're keeping our planet livable for centuries to come.

Ready to save the world?

NUTRITION AND CONSUMER PRODUCT SECTOR

This team is aimed at enhancing human health through molecular nutrition. Our focus is engineering health benefits into nutritional products, by identifying conditionally essential nutrients through mechanism based screening. Positions are available for scientists who can make individual contributions and work effectively in a fast-paced team environment, and who want to focus on discovering and developing useful products.

Opportunities in St. Louis, MO

BS/MS SCIENTISTS:

Multiple openings for individuals with MS, BS or equivalent experience in the biological sciences. Lab competency in one or more of the following: bio-analytical, enzymology, receptor biology, lipid biochemistry, cell culture, high throughput screening, animal physiology, nutrition, diet formulation and small animal surgery. Preference for candidates with experience in statistical analysis or transgenic animal models. **Job Code: BS/MS**

PHD SCIENTISTS:

Endocrinology

PhD with 3-5 years research experience in endocrinology or related discipline. Experience in the study of hormonal regulation of whole body metabolism. Preference for candidates with experience in one of the following: animal models of estrogen action, nuclear receptor biology, adipose biology, and regulation of lipid and lipoprotein metabolism. **Job Code: CT/E**

Animal Model Development

PhD in Physiology, Pharmacology, Biochemistry or related discipline. Experience with establishing and validating animal models of nutritional status or disease states. Preference will be given to candidates with track record of accomplishments using animal models of aberrant metabolism

including: transgenic models of cardiovascular health, obesity and NIDDM. **Job Code: CT/AMD**

Lipid-Lipoprotein Metabolism

PhD in Biochemistry, Pharmacology or related discipline. The candidate should have expertise in animal/human nutrition related to the effects of dietary manipulation of lipid metabolism at the whole body level. Preference for candidates with proven accomplishments using animal models of lipid and fatty acid metabolism. **Job Code: CT/LLM**

Inflammation Science

PhD in Pharmacology or Biochemistry with experience in animal models related to inflammation and ideally, effects of nutritional intervention on inflammation. Preference for candidates with working knowledge of essential fatty acid biochemistry, arachidonic acid metabolism and immunology. **Job Code: CT/IS**

Fatty Acid Biochemistry

PhD in Biochemistry, Molecular Biology or related discipline with experience in lipid biochemistry and molecular biology. Preference for candidates with extensive knowledge of essential fatty acid metabolism. **Job Code: CT/FAB**

Genomics/Molecular Biology

PhD in Molecular Biology or related discipline having extensive experience with modern molecular biology techniques. Preference for candidates with experience in functional genomics or transgenic models. This position will lead development of molecular biology technology to study the interaction between genes and nutrients. **Job Code: CT/GM**

Screen Assay Development

PhD in Biochemistry or related discipline with experience in high throughput biological screening. This position will provide leadership for developing and applying methodology to detect the effect of nutrients on biological systems. Preference for candidates with experience in one or more of the following: mammalian cell culture, gene expression analysis and robotics. **Job Code: CT/SAD**

Nutritional Physiology

PhD in Nutrition Sciences or related discipline. This candidate should have extensive experience in designing studies for investigating the benefit of micro and macronutrients. Preference for candidates with experience in diet formulation and analysis of nutritional status. **Job Code: CT/NP**

Cancer Prevention

PhD in Biochemistry or related discipline. Experience in human cell culture and animal models of tumorigenesis. Preference for candidates with experience in enzymology and toxicology. **Job Code: CT/CP**

GROWTH SECTOR

Fueling strategic growth in high value products and services new to Monsanto.

Opportunity in St. Louis, MO

Transformation Biologist

Responsible for the development, improvement and evaluation of transformation systems to generate genetically modified crops. We seek a degreed professional experienced in tissue culture and plant transformation and regeneration techniques. Excellent leadership skills are necessary. **Job Code: CT/TB**

PHARMA SECTOR

Bringing to the world increasingly innovative and important pharmaceutical products that satisfy unmet medical needs.

Research Chemist, Prep Lab

Conduct organic synthesis experiments to rapidly and safely optimize, modify and invent synthetic methods for the scale-up of intermediates and products. This includes applying modern synthetic organic chemistry to synthesize and isolate defined chemical target compounds. MA in Organic Chemistry or a BA in Chemistry with at least 2 years of synthesis experience in pharmaceutical or fine chemical industries required. Ability to accomplish multi-step synthetic objectives with minimal technical supervision required. In-depth knowledge of theoretical and practical synthetic organic chemistry essential, while experience in diverse areas of synthetic chemistry and practical organic chemistry on the multi-gram scale desired. **Job Code: GR/RCP**

Your job is

Discovery Opportunities in St. Louis, MO

Research Investigator, Combinatorial Chemistry

Design/synthesize new molecular scaffolds utilizing structure-based library design and/or diversity analysis techniques and the validation of high throughput solution-phase and solid-phase synthetic routes to enable the automated production of chemical libraries. Other responsibilities include the development of novel methods reagents for chemical library production and purification as well as integration with chemical informatics and lab automation. PhD or equivalent in Synthetic Organic Chemistry, Medicinal Chemistry or Combinatorial Chemistry. Post doctoral training or industrial equivalent preferred. Demonstrated ability to perform complex multi-step organic synthesis a must. Knowledge/experience with structure-based library design, solution-phase and/or solid-phase chemical library synthesis a plus. **Job Code: GR/RIC**

Research Chemist, Combinatorial Chemistry

Design/synthesis of molecular scaffolds and the validation of solution-phase and solid-phase synthetic routes to enable the production of chemical libraries. Other responsibilities include the re-synthesis, purification, and analysis of chemical library members. Thesis MS or equivalent in Synthetic Organic Chemistry, Medicinal Chemistry, or Combinatorial Chemistry or BS with 2+ years industrial experience in these areas required. Ability to perform multi-step organic syntheses, purification and analysis of organic products a must. Familiarity with solution-phase and/or solid-phase chemical library synthesis a plus. **Job Code: GR/RCC**

Research Scientist, Cardiovascular & Diabetic Disease

Scientist with PhD in Biochemistry/Pharmacology or related discipline to conduct biomedical research aimed at identifying novel therapeutic agents to treat diabetes mellitus, specifically non-insulin-dependent diabetes and its associated vascular complications. Plan/perform experiments using both biochemical and cellular models of diabetes to identify new approaches to the treatment of the disease. Must be self-motivated, independent and possess a strong background in biomedical techniques and a high level of understanding of the biochemical defects in non-insulin-dependent diabetes mellitus. Record of prior accomplishments in the area of diabetes and post doctoral experience is preferred. **Job Code: GR/RSCD**

Research Biologist, Cardiovascular & Diabetic Disease

Research Biologist with a BS/MS in Biology/Biochemistry or related discipline to conduct biomedical research aimed at identifying novel therapeutic agents to treat diabetes mellitus, specifically non-insulin-dependent diabetes and its associated vascular complications. Plan/perform experiments using cellular and biochemical models of diabetes to identify new approaches to the treatment of this disease. Two years experience in biochemical assay development or enzymology required. Must be able to critically analyze experimental data and coordinate/plan scientific studies to meet aggressive timelines. **Job Code: GR/RBCD**

call it home.

Discovery Opportunities in St. Louis, MO & Chicago, IL

Research Investigator, Medicinal Chemistry

Design novel chemical targets based on knowledge of biochemical/pharmacological system under study, and application of modern synthetic organic chemistry to the realization of these targets. Broad experience in organic synthesis, various methods of isolation and purification, and spectral analysis required. PhD in Organic or Medicinal Chemistry, preferably with industrial or academic post doctoral experience, or MS with 8 years pharmaceutical industry discovery experience required. In-depth knowledge in multiple and diverse areas of synthetic organic chemistry, both theoretical and practical, is essential. Ability to learn and understand varying areas of pharmacology a must. **Job Code: GR/RIM**

zation are necessary, including NMR, GC, mass spectrometry and HPLC. Experience with chiral chromatography, protein purification, and sterile technique or microbiological handling a plus. Industrial or post doctoral experience desired. **Job Code: GR/RIB**

Research Biologist

Development/operation of bioanalytical assays to support both new and ongoing projects. Preparation and quality control of complex media, human cell strains/lines (isolated and recombinant), and GMP documentation. BS in Biology, Biochemistry, Pharmacology or equivalent with at least 10 years experience required. Experience with quantitative mammalian cell culture using defined, serum-free systems is a prerequisite. Formal training and several years experience in cGMP/GMP activities such as SOP system and analytical method development and validation desirable. Proficiency in NT desktop and MS office platform required. **Job Code: GR/RB**

Molecular Biologist

BS/MS in Molecular Biology or related discipline essential. Experience in/knowledge of recombinant DNA technologies including nucleic acid isolation, gene cloning and expression, library construction and screening and PCR techniques required. **Job Code: DV/MB**

Biochemist

BS/MS in Biochemistry or related discipline and experience in/knowledge of biochemical assays, protein isolation and/or purification a must. Experience in/knowledge of immunological detection techniques such as Western blotting and ELISAs desirable. **Job Code: DV/BC**

Biologist

BS/MS in Biological Sciences or a related field and basic lab skills essential. Experience in/knowledge of one or more of the following: general microbiology, cell culture, sterile technique, plant cell culture,

Plant Molecular Analyst/ Lab Manager

Manage a molecular analytical lab which analyzes genetic material, including transgenic plants. Will include supervising scientists, managing sample archives and implementing high throughput analyses and novel processes. BS/MS scientist with superb plant molecular biology skills required. Experience with plasmid and genomic DNA isolation, DNA analysis using restriction enzymes, gel electrophoreses, Southern blot analysis, DNA probe construction, PCR and cloning a must. Knowledge of word processing, spreadsheets and DNA analysis software essential. Experience with RFLPs, AFLPs, and marker-assisted plant breeding and knowledge of good lab practices (GLPs) a plus. **Job Code: DV/PMMA**

Post Doctoral Biochemist/Molecular Biologist

Research the effects of environmental stresses on plant metabolism and yield the engineering of plants to reduce these effects. Take part in a multi-functional program team, to include Molecular Biologists, Biochemists and Plant Physiologists, working to genetically engineer plants. Responsibilities include: identification of important genes to the program, gene isolation and manipulation, kinetic evaluation of enzymes, enzyme assay development, biochemical characterization of plants, development of hypothesis and research plans, technical communication and interaction internal and external to the program. PhD and publication record in Biochemistry or Molecular Biology required. Experience in gene cloning, PCR analysis, Northern and Southern hybridization and assay development in kinetic evaluations desired. Expertise in a plant system is not required and applicants with relevant skills from research in other organisms are encouraged to apply. **Job Code: DV/PDB**

Candidates for all positions must be able to work effectively in a team-based environment and possess excellent written and verbal communication skills. The ability to coordinate and plan specific objectives and meet aggressive timelines required. Strong PC skills a must.

Join a team that values diversity, innovation and teamwork. Please indicate which position you are interested in, and submit your resume, in a format suitable for scanning, to: **Monsanto Life Sciences Company, 800 N. Lindbergh Blvd., Mail Zone C3SB, Job Code (insert from above), St. Louis, MO 63167.**

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To learn more about Monsanto, please visit our website at:
www.monsanto.com

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to save it.

Research Chemist, Medicinal Chemistry

Application of modern synthetic organic chemistry to the synthesis of defined chemical target compounds. Broad experience in organic synthesis, various methods of isolation and purification, and spectral analysis required. Research MS in Organic Chemistry or BS with 2 years experience in the pharmaceutical industry discovery area required. In-depth knowledge of synthetic organic chemistry, both theoretical and practical, is essential. Experience in multiple and diverse areas of synthetic chemistry required. Demonstrated ability to successfully accomplish multi-step synthetic objectives safely with minimal technical supervision required. **Job Code: GR/RCM**

Pre-Clinical Opportunities in St. Louis, MO

Research Investigator, Biocatalysis

Scientists involved in biocatalysis development are committed to the application of biocatalysis to organic synthesis. Perform lab scale experiments to swiftly and safely evolve synthetic methods, primarily based on biologically derived catalysts, and consistent with the overall goals of the pharmaceutical program. Requires knowledge of organic chemistry synthetic methods and a reasonable understanding of biochemistry and microbiology. Ability to perform proof of structure using modern analytical techniques essential. PhD or equivalent industrial experience in Organic Chemistry, Microbiology or Biochemistry, with experience in biocatalysis required. A strong background in organic chemistry is essential. Familiarity with appropriate analytical techniques needed for organic synthesis, enzymology and protein characteri-

Research Investigator, Protein Analytics Methods Development/Characterization

Scientists involved in protein therapeutic analytical methods development are involved in the selection, design, optimization, and qualification/validation of analytical methods. These methods are applied to the characterization of protein therapeutic candidates and for the release of production lots. BS (MS preferred) and practical and analytical lab experience in methods typically utilized for protein characterization essential. Familiarity with protein handling techniques required. Experience with the analytical techniques of electrophoresis and HPLC, analytical methods development, validation and cGMP desired. Must be highly interactive, meticulous and possess good documentation and record keeping skills. **Job Code: GR/RIPA**

AG SECTOR

Transforming the way food and fiber are produced while contributing to delivering health, wellness and nutrition to everyone in the world.

Opportunities in St. Louis, MO

Protein Biochemist (Disease Control Team)

Provide expertise and experimental support for discovery/development of novel proteins for plant disease control. PhD/BS/MS in Biochemistry or related field and 2-3 years experience in protein purification from microbial and plant sources required. Molecular biology experience and knowledge of protein assay development, protein characterization and/or high throughput a plus. **Job Code: DV/PB**

plant transformation, and/or whole plant biology including greenhouse or growth chamber experience a must. **Job Code: DV/B**

Technical Leadership (Insect Control Program)

Will provide leadership to the team developing insect control in cotton. PhD in Molecular Biology, Biochemistry, Entomology or other relevant discipline essential. Four years experience in a biotechnology-related field a must; agricultural biotechnology experience preferred. Experience with transgenic plants and/or insect control and project leadership skills/experience desirable. Excellent technical capabilities a must. **Job Code: DV/TL**

Protein Engineers (Insect Control Program)

PhD/MS/BS in Molecular Biology, Biochemistry or related discipline required. Experience in a broad range of biochemical, recombinant DNA technologies and expression essential. Demonstrated experience in the engineering of proteins or protein structure/function studies desirable. **Job Code: DV/PE**

Analytical Molecular Biologist

Development/application of diagnostic analytical methods for the characterization of genetically modified crops and research materials (DNA). Will include evaluating new molecular diagnostic methods to make improvements and implementing/improving efficiency of high throughput DNA extraction to analyze genetic materials. PhD and experience with molecular diagnostic methods (PCR and Southern blotting) and molecular breeding required. Experience with RFLPs, AFLPs and marker-assisted plant breeding, along with knowledge of good lab practices (GLP) a plus. **Job Code: DV/AMB**

What does it take for a Fortune 100 company to achieve and sustain its place as one of the world's premier research-based health care companies? It takes a collaborative and dedicated scientific community: people from all backgrounds and viewpoints sharing together the rewards of working on one of the most distinguished and diverse pharmaceutical product pipelines anywhere. It takes a multidisciplinary environment and culture that rewards original thinking and provides ample opportunities for professional achievement. And most of all, it takes a commitment to providing personal flexibility, professional challenge and hands-on access to a wealth of corporate and scientific resources. This is what some of the industry's finest scientists find at Pfizer. Come find a place for your unique goals on our talented and motivated team.



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Boundaries.



BS/MS and Ph.D. Scientists

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

- Animal Health Discovery - Biology
- Analytical Chemistry
- Biochemistry
- Bioinformatics
- Biological Sciences
- Biostatistics
- Cell Biology
- Chemical Engineering
- Clinical Information Systems
- Clinical Measurements
- Clinical Research
- Drug Metabolism/ Pharmacokinetics
- General Pharmacology
- Human Genetics
- Molecular Biology
- Neuroscience
- Pharmacology
- Pharmacy
- Physiology
- Process Development
- Project Management
- Protein Chemistry
- Psychotherapeutics
- Regulatory Affairs
- Synthetic Organic Chemistry
- Tissue Culture
- Toxicology/Pathology

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At Boehringer Ingelheim Pharmaceuticals, Inc., professionals from all over the world work together to make our vision of improving human health a reality. Collaborating in state-of-the-art R&D facilities in the US, Canada, Germany, Japan, Austria and Argentina, our team meets the challenges of scientific discovery through a commitment to innovation, added value, globalization and efficiency. While we respect and embrace the cultural differences each of our team members brings to the table, we take great pride in the culture we foster as the world's largest privately-held pharmaceutical company. Our work environment is one that thrives on fresh ideas and promotes creative discovery. It is the knowledge and the skills of many different professionals working in concert that make our research and development goals attainable. At Boehringer Ingelheim Pharmaceuticals, Inc., our global family is united by our commitment to keeping the global community healthy.

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1990. Women and minorities are 32 percent of scientists and engineers in this group, and underrepresented minorities 8 percent. Among industrial scientists who received degrees since 1985, 13 percent of women and 10 percent of men are managers. Progress has been uneven. Women and minority students still take fewer high-level science and math courses, and earn fewer Bachelor's, Master's, and Doctoral degrees in science than white males. Degrees remain concentrated in sociology and psychology. Women and minorities with Bachelor's and Master's degrees still favor academic careers rather than business or industry.



Joseph Thomas

Diversity: A Legacy at Hoechst Marion Roussel USA

Merge an American pharmaceutical company, a German pharmaceutical company, and a French pharmaceutical company.

What do you get? A new international company where a diverse, multicultural work force is not just a corporate initiative, but a historical legacy.

Hoechst Marion Roussel was formed in 1995 from Germany-based Hoechst AG, France-based Roussel Uclaf, and United States-based Marion Merrell Dow. It now employs more than 40,000 people in 80 countries with one of the industry's largest research budgets.

Each company had its own commitment to a diverse work force and experience operating internationally in multicultural environments. Now Hoechst Marion Roussel is building a new company on this legacy. "We constantly benefit from the diverse cultural backgrounds, rich traditions, and pioneering spirit of our scientists and predecessor organizations," said Joseph Thomas, human resources manager for United States Research. "Our goal is to use the diversity within our research organization to



MICHAEL GULIANO

Hoechst Marion Roussel has the natural diversity of its multinational, multicompany work force.

our advantage and build the future of Hoechst Marion Roussel on that diversity. We consider the diversity of our researchers to be a major competitive advantage in our ability to meet patients' needs." How can a company create a work environment more attractive to women and minority scientists?

In addition to the natural diversity of its multinational and multicompany work force, the company continually seeks to provide an attractive work environment for all employees, including female and minority scientists.

Thomas is excited about one of Hoechst Marion Roussel's most recent efforts: Formation of a U.S. Diversity Council to advise management on ways to support work environments that embrace and foster diversity. The council consists of employees from different levels of the company. They meet periodically, present recommendations to senior management, and then work on implementation.

One current project involves developing and implementing programs that increase employee awareness about the value of diversity. At the management level, the company holds leadership

development programs and diversity is part of the curriculum.

Hoechst Marion Roussel uses multinational teams to manage its entire business. They work on levels from Executive Committee level to R&D project teams. "Conducting business from a team perspective is beneficial to the whole research and development process," Thomas explained. "It brings a diversity in thinking, a diversity in approaches to solving problems that encourages very creative approaches and solutions to scientific problems. As people of diverse backgrounds work in a team setting, they learn to value cultural differences."

Hoechst Marion Roussel backs a variety of community outreach and educational programs, ranging from middle school to the postdoctoral level. They are designed to make young people, especially females and minorities, think about science careers.

What about California's Proposition 209, which eliminates race and sex factors in state hiring and programs? "It has no effect," Thomas said. "We are opening our doors to highly skilled researchers from all backgrounds and still hiring the best-qualified candidates."

The Fellowship Program in Academic Medicine for Minority Students

Sponsored by Bristol-Myers Squibb Company
Established by The Commonwealth Fund

The Fellowship Program in Academic Medicine for Minority Students provides opportunities for men and women of four underrepresented groups to explore careers in academic medicine and research. Fellows build upon their individual foundations in bio-medical research and join an invaluable professional network and support system.



1997 Academic Medicine Fellows

The 35 young men and women selected as 1997 Academic Medicine Fellows were chosen from an applicant pool of 80 outstanding candidates nominated by the deans of 54 medical schools.

If you are approaching your second or third year of medical school and are of African-American, mainland Puerto Rican, Mexican-American or Native American descent, information can be obtained from: National Medical Fellowships Inc., 110 West 32nd St., 8th Floor, New York, NY 10001-3205. (212) 714-0933.



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MEMORIAL SLOAN-KETTERING CANCER CENTER

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Postdoctoral Training Fellowships are available in basic and clinical research. Stipends provided are based upon level of postdoctoral experience. For additional information write to the program directors listed below. Only U.S. Citizens or Permanent Residents are eligible for appointment.

CLINICAL SCHOLARS TRAINING PROGRAM IN

BIOMEDICAL RESEARCH - Richard A. Rifkind, MD - Director

This program provides training for a select group of physicians who have completed their clinical training and demonstrate a commitment to careers in biomedical research. Training opportunities are available in molecular biology, cell biology, genetics, cellular biochemistry and biophysics, immunology and molecular pharmacology and therapeutics.

SURGICAL ONCOLOGY RESEARCH TRAINING

PROGRAM - Murray F. Brennan, MD - Director

The program seeks to strengthen academic surgical oncology research by training surgical fellows in laboratory research related to biology of human cancer. Research opportunities include areas such as metabolism, neurophysiology, molecular biology, cell biology, immunology, immunopathology and genetics.

PSYCHIATRIC AND PSYCHOLOGICAL RESEARCH

TRAINING IN AIDS - Jimmie Holland, MD - Director

This program seeks to train investigators to conduct research on the psychosocial adaptation and mental health of people infected by HIV and AIDS. This program draws upon faculty investigating psychiatric, neuropsychological, behavioral, cultural and social systems aspects of HIV/AIDS in diverse populations. Current investigations include trials of psychosocial and psychopharmacological interventions for infected individual and/or their families, qualitative research on adaptation to illness, and large scale health services research projects examining the effects of advances in medical treatment and health care policy changes. Training provides fellows with grounding in clinical research issues through supervised independent research, seminars, rounds, and a visiting professors series.

PSYCHIATRIC AND PAIN RESEARCH TRAINING IN

CANCER - Jimmie Holland, MD - Director

This program addresses the urgent need for a cadre of investigators with expertise in the supportive areas of pain, psycho-logical distress, supportive/palliative care, psychoneuro-immunology and behavioral medicine. The training program is open to psychologists and physicians with training in psychiatry, neurology, medicine and oncology. Research focuses on the psychiatric, neuro-psychological, behavioral, neuro-immunological and pain related (clinical and laboratory) aspects of patients with cancer. Curriculum includes didactic seminars, apprenticeship with clinical investigators in pain, psychiatry, psychology and neurology and supervised independent research.

HEAD AND NECK TRAINING PROGRAM - SURGICAL

ONCOLOGY - Stimson P. Schantz, MD - Director

This is a two-year program with dedicated clinical and research opportunities in head and neck oncology. A specific focus will be placed on cancer prevention and detection strategy for tobacco-induced cancer.

CANCER CHEMOTHERAPY TRAINING PROGRAM

George J. Bosl, MD and Dean F. Bajorin, MD - Co-Directors

This program supports training of promising candidates for certification in Hematology and/or Medical Oncology for academic laboratory or clinical research careers in the treatment of neoplastic diseases. Available laboratory cancer research opportunities include molecular biology, genetics, cell biology, immunology, cellular biochemistry, and molecular pharmacology related to cancer. Clinical research training encompasses phase I, II and III trials of chemotherapy and immunologic agents, pharmacology and pharmacokinetics, correlative studies with molecular markers, and combined modality trials with medical, surgical, and radiation components.

IMMUNOLOGY RESEARCH TRAINING PROGRAM

Alan Houghton, MD - Director

The program offers training in areas of modern immunology. These include T cell development and selection, decisions about life and death of lymphocytes, signals involved in lymphocyte activation and inhibition, new lipid-based signaling pathways and human immunogenetics. The program also has strong efforts in cancer immunology with an emphasis on understanding immunity and immune tolerance to cancer antigens and development of new therapies.

TRAINING PROGRAM IN MOLECULAR PATHOLOGY

OF HUMAN CANCER - Juan Rosai, MD - Director

This two-year program aims to position pathologists committed to a career in biomedical research. Active areas include control of cell growth, receptor biology, molecular neuro-oncology and applied investigations on oncogenes and tumor suppressor genes.

TRAINING IN RADIATION ONCOLOGY SCIENCES

Zvi Fuks, MD and C. Clifton Ling, PhD - Co-Directors

The program's objective is to promote development of full-time academic careers integrating clinical, biological and physical investigations with clinical radiation oncology. For radiation oncologists, this program will provide a two-year research rotation; for PhD biological scientists, the two-year training will be laboratory-based with interface to clinical oncology; medical physics trainees will participate in radiotherapy research for two years.

MSKCC is committed to equal opportunity. Members of minority groups are encouraged to apply.

Biotechnology's Leading Edge Leads **STRAIGHT** TO *Lilly.*

Lilly is a premier biotechnology company and a world leader in the production of therapeutic proteins. Our Division of Research Technologies and Proteins is leading the way in the race to identify drug targets and develop therapeutic proteins. We are currently expanding our Bioprocess Research and Development group, which develops commercial processes to express, isolate, purify, modify and characterize recombinant therapeutic proteins. We are specifically focused on growing our mammalian cell culture expertise to complement our strong presence in Prokaryotic expression and downstream processing technologies. Our position and resources allow us to offer remarkable opportunities for equally remarkable professionals who insist upon cutting-edge projects and excitement in their work. Innovation at Lilly is supported by the best scientific minds and a visionary company with a 100 year-plus reputation of constantly striving for excellence.

BS/MS Biochemists

We are seeking several individuals who possess strong expertise in the isolation, purification, and manipulation of protein products derived from various recombinant DNA expression systems. Proven experience in the fields of preparative chromatography, protein folding, enzymology, and analytical characterization are considered ideal. The preferred candidate will possess a BS or MS degree in biochemistry or equivalent discipline, and have a minimum of 2 years relevant experience. In addition to possessing strong scientific skills, candidates should be capable of effectively planning and managing their time and activities, and communicating their results.

BS/MS Analytical Biochemists

We are seeking multiple candidates with proven experience in analytical biochemistry. The preferred candidates will possess a BS or MS degree in Biochemistry, Chemistry or equivalent discipline, and ideally have 2 or more years of relevant experience. Candidates will have proven experience in analytical method development via HPLC, ELISA, Western blots and restriction enzyme digest methods OR protein characterization via ESI and MALDI mass spectrometry, protein sequence analysis, carbohydrate analysis, amino acid analysis and HPLC. Written and verbal communication skills and a demonstrated ability to work in an independent manner are essential for all analytical positions.

Ph.D. Mammalian Cell Molecular Biologist

The successful candidate should possess a Ph.D. and postdoctoral experience in molecular biology and cell biology and seven years of industrial experience including cGMP familiarity. The scientist should have demonstrated success optimizing expression, manipulating protein processing and post-translational modification in a variety of mammalian cell lines. Leadership and team building experience are a must. The job requires regular interactions and handoffs with other groups including discovery scientists who provide preliminary cell lines producing potential therapeutic products, analytical and other groups who support the development efforts, cell culture scientists who optimize and scale up cell culture, regulatory, QA and QC staff who insure compliance and support registration of products.

Ph.D. Cell Culture Development

We are seeking a highly qualified individual to develop novel processes to express therapeutic proteins using mammalian cell culture technology. The qualified candidate will have experience with large scale mammalian cell culture and harvest techniques, will have developed media formulations and process control strategies, and will have a working knowledge of CBER regulatory requirements. Experience in the drafting of regulatory documents, and transfer of processes from development to commercial manufacturing facilities is desirable. Successful applicants will have a Ph.D. in Biochemical Engineering, Cell Biology or Microbiology and 5-7 years post doctoral experience.

Postdoctoral Molecular Biologist

The postdoctoral associate should have a strong background in Molecular Biology, Microbiology and Microbial Genetics with particular emphasis on regulation of gene expression, site specific mutation and directed evolution. Experience in protein purification including design and use of purification handles will be a plus. The candidate will be expected to use knowledge of gene expression to develop novel vectors, improve host strains, and express heterologous proteins.

BS/MS Mammalian Cell Molecular Biologists

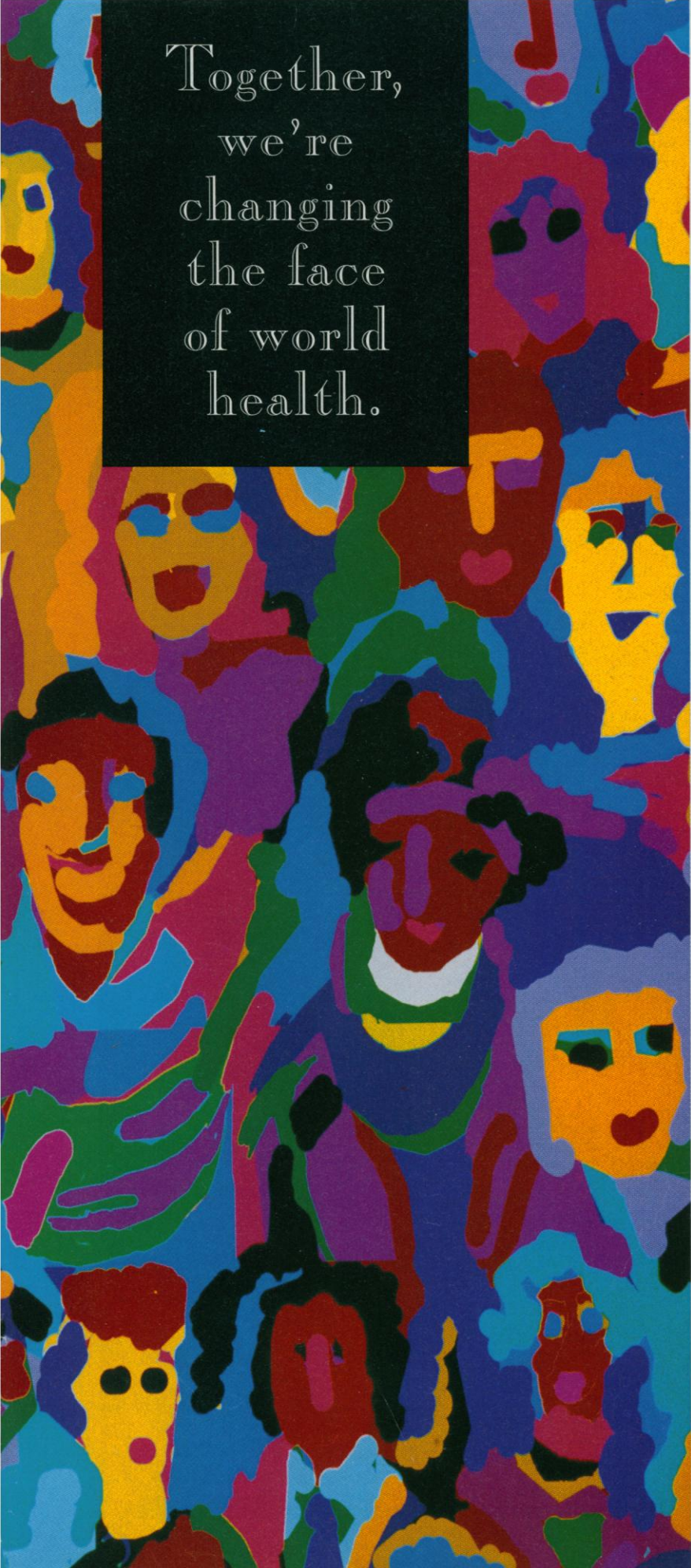
The successful candidates will have demonstrated success constructing cell lines to express recombinant proteins. General molecular biological training with a BS or MS degree in Biochemistry, Molecular Biology, Microbiology, or equivalent discipline is essential. The applicant should be able to construct recombinant DNA molecules, analyze the DNA with a variety of techniques such as restriction mapping, southern and northern blots, and quantitative measurements. The successful candidate will know how to grow cultures and analyze expression using techniques such as PAGE, western blots, and ELISAs.

For confidential consideration, please send your resume and cover letter indicating the position of interest to: **Eli Lilly and Company, Bioprocess Research and Development, DC 1818, US Recruiting and Staffing, Lilly Corporate Center, Indianapolis, IN 46285.**

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

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At SmithKline Beecham, the discovery and development of tomorrow's innovative healthcare solutions takes on a truly global perspective. Here, scientists from all over the world pool their diverse talents, creating a collaborative atmosphere that embraces diversity and encourages breakthrough thinking. Through their united efforts, we are shaping a healthier, more vibrant future for everyone.

With one of the largest R&D budgets in the industry, SmithKline Beecham supports a highly-energized environment of innovation and productivity. Here, some of the world's most gifted scientific minds have the opportunity to challenge and be challenged. Their work is radically changing the drug discovery process and reducing development cycle times. Continuing advancements have created opportunities at our suburban Philadelphia locations for scientists in the following disciplines:

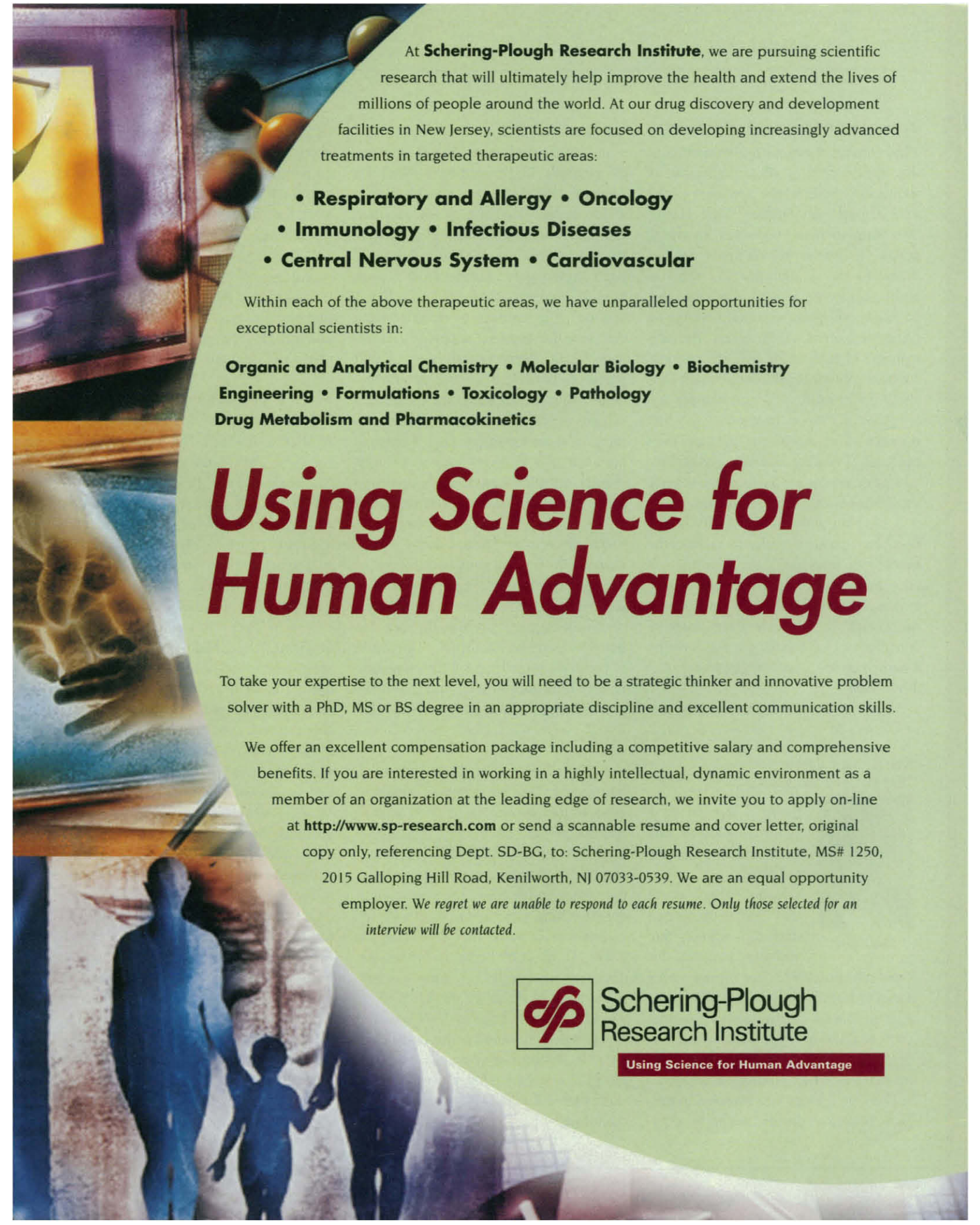
- Advanced Information Technology
- Anti-Infectives Research/Microbiology
- Bioinformatics
- Biometrics (Statistics and SAS Programming)
- Biopharmaceutical Development
- Chemical Development
- Clinical Data Management
- Clinical Dictionary Development/Maintenance
- Computing Application and Support Technologies
- Computing and Network Technologies
- Drug Metabolism and Pharmacokinetics
- Medicinal Chemistry
- Molecular Virology and Host Defense
- Pharmaceutical Technologies
- Pharmacology
- Physician Scientists
- Synthetic Chemistry
- Toxicology

SmithKline Beecham offers a competitive compensation/benefits/relocation package and a stimulating work environment in which to grow and excel. For confidential consideration, please send a resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Job Code M7-10/31, P.O. Box 2645, Bala Cynwyd, PA 19004. For more information on SmithKline Beecham, visit our Web site at www.sb.com/careers. We are an Equal Opportunity Employer, M/F/D/V.



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At **Schering-Plough Research Institute**, we are pursuing scientific research that will ultimately help improve the health and extend the lives of millions of people around the world. At our drug discovery and development facilities in New Jersey, scientists are focused on developing increasingly advanced treatments in targeted therapeutic areas:

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We offer an excellent compensation package including a competitive salary and comprehensive benefits. If you are interested in working in a highly intellectual, dynamic environment as a member of an organization at the leading edge of research, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, referencing Dept. SD-BG, to: Schering-Plough Research Institute, MS# 1250, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*



**Schering-Plough
Research Institute**

Using Science for Human Advantage

Increasing the Applicant Pool at Abbott

"The number of women and minorities in the workplace is a direct reflection of what's out there in the applicant pool," said Abbott Laboratories' Rick Harris. "We want to make ourselves known to people of diverse backgrounds, to students, to the community. We want to build relationships with students that hopefully will grow to fruition where we bring them on as regular hires." Harris is manager of staffing for Abbott's pharmaceutical products division, which has about 5,000 workers. About half are scientific staff. Abbott recognized the link between diversity in the job applicant pool and workplace diversity, and mounted several programs to encourage science careers for women and minorities.

A program with the University of Illinois, for instance, seeks to reduce the number of undergraduate minority science majors who switch to non-science majors. Abbott matched 15 science students with 15 staff scientists. Students and mentors communicate regularly by e-mail or phone, discussing academic and other issues.

Abbott also brings the students onsite,

and sends its scientists to present programs at the university. Abbott sponsors 27 students in the national INROADS program. INROADS was established in 1970 to develop and place talented minority students in business and industry to prepare them for leadership roles. Each student gets a mentor from Abbott, attends summer seminars, and has a chance at a summer internship. Each company division has "adopted" a historically black college or university. Abbott staffers forge close relationships with students by presenting seminars, speaking at campus events, donating scientific equipment, and attending job fairs. Company outreach also includes support of community organizations. Harris's predecessor as manager of staffing, for instance, is an "executive-on-loan" who serves as president of the Lake County Urban League. She lends a hand with recruiting minority scientists. Such efforts help schools and give biopharmaceutical companies an edge in recruiting the most talented women and minorities. "Our aim is to try to do something for the community, and to attract women and minorities to jobs here at Abbott Laboratories," Har-

ris noted. "It's a way of informing people about what we are and what we do as a corporation. These students go back and tell their colleagues and other people what they did for the summer, who they worked with, what Abbott is all about."

Proposition 209 has had no effect on recruiting efforts. "It's been basically transparent to us," Harris said. "Our goal first and foremost is to do the right thing and hire the best, most qualified employees in all situations."

Baxter's "Start-When-They're-Young" Philosophy

At Baxter Hyland Division, efforts to increase work force diversity begin at the high school level, according to senior human resources representative Janet Duncan. "We're trying to encourage more people of diverse backgrounds to pursue careers in science, and we start when they're young." Duncan described two of the newest efforts. One, "Teens at Work," is a take-off on national "Bring Your Child to Work Day." Baxter hosts a group of local high school students for an overview of the company and meetings with female scientists, supervisors, and managers. The latest group consisted of girls, most of whom were from minority groups underrepresented in science. Baxter's female staffers described their own backgrounds, how they got involved in science, and the sense of achievement of working in the biopharmaceutical industry.

Baxter's Hyland Division also fosters high school students through a program funded by Berkeley Biotech Education, Inc., a local nonprofit organization. The program trains students in practical scientific skills, matches them with biopharmaceutical companies for summer internships, helps them apply to college, and connects them with jobs after graduation.

Until such efforts further diversify the applicant pool, biopharmaceutical com-

Hot-Wiring a Career: "Get involved...network..."



Rick Harris

You're a woman or a minority scientist and have landed a job in the biopharmaceutical industry. What's next? How can you jump-start that career, and position yourself for rapid advancement? Tips on hot-wiring a career from Rick Harris, staffing manager in Abbott Laboratories's pharmaceutical division:

My first advice would be to get involved. Don't let yourself be isolated.

Don't be a loner. Get involved in projects, in various groups, in sports activi-

ties, and other things the corporation has to offer. Take advantage of opportunities to join special teams or to head a team or project. Then, in all capital letters, I'd say, "NETWORK." I can't emphasize enough to anyone, especially minorities and females, the importance of networking. Get out and meet folks in various career paths that you'd like to follow. Third, don't be afraid to take on developmental roles to gain needed skills. A lot of times we think, "Well, if it's not a promotion, I shouldn't take it." A promotion isn't always the best thing for you. Sometimes you need a lateral move, a developmental move, to gain skills that will make you promotable in the future.

The quality and creativity of the people we employ at Wyeth-Ayerst Research exemplifies our high standard of intellectual and cultural diversity. Be part of a dynamic environment where people, ideas and technology come together with one common goal: breakthrough therapies for a healthier world. As we move into the next millennium, we are exploring new technologies, innovative molecular approaches and evolving formulations that will produce a wide range of state-of-the-art pharmaceuticals and products.



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Our four Research Centers of Excellence are located in Radnor, Pennsylvania, Princeton, New Jersey, Pearl River, New York and Chazy, New York. To inquire about current opportunities, contact: **Wyeth-Ayerst Research, Human Resources Dept., Position #OPSCI-1097, P.O. Box 7886, Philadelphia, PA 19101-7886.** FAX: (fine mode) 610-989-4854. E-mail: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume). Principals only. Equal Opportunity Employer, M/F/D/V.

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1998 COURSE OFFERINGS

• CELLULAR AND MOLECULAR BIOLOGY

Biology of Parasitism: Modern Approaches

June 11 - August 14

Director: Edward J. Pearce, Cornell University

Embryology: Concepts and Techniques in Modern Developmental Biology

June 14 - July 25

Directors: Marianne Bronner-Fraser, and Scott E. Fraser, California Institute of Technology

Frontiers in Reproduction Research: Molecular and Cellular Concepts and Applications

May 26 - July 5

Directors: Joan Hunt, University of Kansas Medical Center; Kelly Mayo, Northwestern University; and Gerald Schatten, Oregon Health Sciences University

Physiology: Cellular and Molecular Biology

June 14 - July 25

(postcourse research: July 27 - August 10)

Director: Kerry Bloom, University of North Carolina at Chapel Hill

• MICROBIOLOGY

Microbial Diversity

June 14 - July 30

Directors: Edward R. Leadbetter, University of Connecticut; and Abigail Salyers, University of Illinois

Molecular Mycology: Current Approaches to Fungal Pathogenesis

August 9 - August 29

Director: Aaron P. Mitchell, Columbia University

• NEUROSCIENCE

Neural Development and Genetics of Zebrafish

August 16 - August 28

Directors: John E. Dowling, Harvard University, and Nancy Hopkins, Massachusetts Institute of Technology

Neural Systems & Behavior

June 14 - August 7

Directors: Janis C. Weeks, University of Oregon, and Harold H. Zakon, University of Texas

Neurobiology

June 14 - August 15

Directors: Gary Banker, Oregon Health Sciences University, and Daniel V. Madison, Stanford University

Neurobiology and Development of the Leech

August 8 - August 29

Directors: Martin Shankland, University of Texas, Austin, and Chris Sahley, Purdue University

Methods in Computational Neuroscience

August 2 - August 29

Directors: William Bialek, and Rob de Ruyter van Steveninck, NEC Research Institute

Rapid Electrochemical Measurements in Biological Systems

May 14 - May 18

Director: Greg A. Gerhardt, Rocky Mountain Center for Sensor Technology, University of Colorado Health Sciences Center

• TECHNIQUES TRAINING

Analytical and Quantitative Light Microscopy

May 7 - May 15

Directors: Greenfield Sluder, and David Wolf, University of Massachusetts Medical Center, Worcester

Microinjection Techniques in Cell Biology

May 19 - May 26

Director: Robert B. Silver, Marine Biological Laboratory

Optical Microscopy and Imaging in the Biomedical Sciences

October 7 - October 15

Director: Colin S. Izzard, State University of New York, Albany

• GENETICS AND EVOLUTION

Workshop on Molecular Evolution

August 2 - August 14

(special topics session August 15 - 21)

Directors: Mitchell L. Sogin, Marine Biological Laboratory, and Daniel Davison, Bristol-Myers Squibb

• INFORMATION SCIENCE

Medical Informatics

(sponsored by the National Library of Medicine)

May 31 - June 7

Director: Daniel Masys, University of California, San Diego

• VISION

Fundamental Issues in Vision Research:

Molecular and Cell Biological Approaches

August 16 - August 29

Director: David S. Papermaster, University of Connecticut Health Center, Farmington



Admissions to MBL courses is competitive; student selection is determined by review committees appointed for each individual course. Substantial financial assistance is available for many programs.

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Further information and application forms are available at (<http://www.mbl.edu>) and by contacting: **Carol Hamel, Admissions Coordinator, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015** (admissions@mbi.edu)
Phone: (508) 289-7401

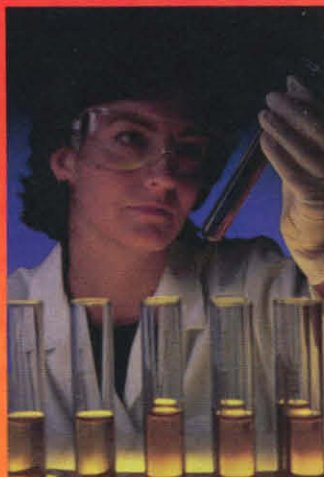


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of
life



Novartis Crop Protection, Inc., a leader in the development, manufacture and marketing of agricultural chemicals, is seeking motivated individuals to join us at our Biotechnology and Genomics Center in the Research Triangle Park in North Carolina. Successful candidates will be interested in basic research and development of novel technologies in an industrial research unit.

Microbiologist

(Job # 9734)

You will conduct fungal molecular biology experiments within our fungal genomics project area. Specific responsibilities will include developing high-throughput screening assays.

To qualify, you must have either a master's degree or a bachelor's degree with 2 years of experience in biology, biochemistry, microbiology or a related science. At least 2 years experience with molecular biology techniques, including PCR, cloning and hybridization, is essential, as is experience with reporter gene technology and independent lab study. Computer skills are helpful. Candidate should be a team player and possess superior analytical, problem-solving and organizational abilities. Excellent communication and interpersonal skills are also required.

Fungal Geneticist

(Job # 9743)

You will conduct fungal molecular biology experiments within our fungal genomics project area. Specific responsibilities will include designing high-throughput screening assays and creating novel tools for cellular assay development.

To qualify, you must have a PhD in microbiology, microbial genetics or a related science and at least 2 years of postdoctoral experience in microbiology, genetics and biochemistry. Expertise with molecular biology techniques, such as PCR, hybridization, and cDNA library construction, is essential. Experience with yeast or fungal genetics is helpful, as are computer skills, particularly with bioinformatic programs. Candidate should have demonstrated leadership skills on a project team and possess superior analytical, problem-solving and organizational abilities. Excellent communication and interpersonal skills are also required.

Postdoctoral Associate-Biocontrol

(Job # 9744)

You will conduct research in the following areas: development of improved bacterial biocontrol strains for the control of fungal plant pathogens through recombinant DNA technology; synthesis and regulation of antifungal compounds by bacterial genes; and engineering of metabolic pathways to increase bacterial metabolite production.

To qualify, you must have a PhD in microbial genetics, molecular biology or biochemistry.

Novartis offers a competitive salary commensurate with qualifications and experience, a comprehensive benefits package, and an environment conducive to professional achievement. Qualified candidates should forward a resume and cover letter (which should include job number), and a list of three (3) references to: Novartis Crop Protection, Inc., Biotechnology and Genomics Center, HR, PO Box 12257, Research Triangle Park, NC 27709-2257. We are an Equal Opportunity Employer, m/f/d/v.

For more information, visit our website at www.novartis.com.

Howard Hughes Medical Institute

Fellowships for Biological and Biomedical Sciences

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

Predoctoral Fellowships in Biological Sciences

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

Postdoctoral Research Fellowships for Physicians

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

Research Training Fellowships for Medical Students

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

Research Scholars at the National Institutes of Health

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

1998 Program Announcements and Applications

For Predoctoral Fellowships:

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

For Other Programs:

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

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

In a perplexing world

How can sequencing of DNA be further accelerated? Do protons decay? To what extent have waste products from bygone munitions factories contaminated the soil? Do proteins in thermophilic archaea hold promise for forensic medicine and cancer therapies? Through ion irradiation, which materials can be greatly enhanced? As to nuclear waste, how can it be stabilized and minimized for safer disposition?

At Argonne National Laboratory, answers to these and many, *many* other pressing questions are being discovered by some of the world's leading scientists, a highly diverse, international group using today's finest research tools—such as our Advanced Photon Source, producing “firstlight,” the world's most powerful x-ray beams.

Learn about our opportunities in energy and environmental science/technology, engineering research, physical research and more. Send resume to: Walter D. McFall, Box SCI - 43 Employment and Placement, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, IL 60439. TDD: 630/252-7722. Home page: <http://www.anl.gov/welcome.html>



Equal Opportunity/Affirmative Action Employer



there are people working on answers.

panies will have to become more creative in efforts to recruit and retain women and minorities, Duncan said. "Demand for women and minorities already is high and will become much higher. I don't think from an organizational standpoint that Proposition 209 is going to affect us. Baxter's philosophy always has been and will be to attract the most qualified candidates, but we will still practice affirmative action very aggressively and we will still try to identify high-potential females and minorities in our recruiting effort." What kinds of creativity? More of the approaches already catching on at Baxter and other companies. These include flexible work hours, job sharing, and telecommuting for female workers who must balance work and family responsibilities. Companies also must put more emphasis on promoting women and minorities into higher-level management positions, she said. With demand high, women and minority applicants often can afford to be selective. "Even though candidates are always told to sell themselves during an interview, they should also make sure the organization is trying to sell itself," Duncan said. Job candidates should be sure they feel comfortable with the organization. Important clues about a company's philosophy toward diversity can come during the interview process.

Duncan's advice: Observe how open the interviewer is in responding to questions about the organization, its culture, and values. People conducting job interviews are very reflective of the whole organization. If you're not comfortable with them, you probably won't be comfortable with the organization. Look for consistency among interviewers in answering questions relating to diversity and other issues. Also do your homework. Have some knowledge about the company you're interviewing with and ask questions.



Mary Grigas

Steady Increases in Diversity at Zeneca

Mary Grigas, Manager of Human Resources, Development, took a lead role in coordinating diversity efforts for Zeneca Pharmaceuticals. Grigas has been involved in efforts to recruit women and minority scientists, retain them in the work force, and maintain a work environment that embraces diversity. She sees definite progress in those efforts, and difficult work still ahead to sustain a more diverse pool of job applicants.

"We have seen a steady increase in the representation of women and minorities," Grigas said. "We expect it to continue. We strive to create a work force which reflects the community from which we recruit." Zeneca supports several programs to boost interest in science careers.

One is Science Alliance, a partnership between businesses and the educational community formed to enhance science and technology education of students in Delaware. Zeneca scientists present school workshops, bring students into labs for a first-hand look at industrial research and development, and help teachers with science curricula.

The NSF study found that women and minorities leave industrial science jobs more often than men. What can be done to improve their retention in the workplace?

"We try to provide a work environment and a business culture that values diversity, supports development, and encourages each employee to achieve their full potential," Grigas said. Many in-house training programs offer employees assistance with developing core competencies and skills needed for job advancement. Some focus on communication, interpersonal awareness, writing, making presentations in front of a group, and project management.

Grigas emphasized the importance of

women and minorities retaining their individual identity as opposed to being assimilated into the work force. She recommends that all employees focus on developing skills that she views as critical for success: The ability to communicate in writing and orally, to work as a member of a team, to influence others, and to gain a commitment from them.

Family responsibilities sometimes influence female scientists to leave the work force. "We have a broad array of work-life programs that are designed to help employees balance the challenges we all face," Grigas said. These include child and elder care referral services, flex-time, and an employee assistance program.

Training and work-life programs help individual employees, and also send a clear message throughout the workplace: "This company is interested in me as an individual, and is willing to make an investment in me," Grigas said. "I think this is very helpful in retaining employees." Grigas noted another effort to retain women, minorities, and other employees: "We have a very competitive compensation and reward program which takes into account individual contributions to the company." Proposition 209's impact? "We still believe in a culture and a company that is very diverse in nature," Grigas said. "Diversity brings us talent and creativity that we regard as a key to success." ■

November Career Workshops:

Join us for an online discussion group on diversity in the scientific work force at the Science Professional Network Web page (www.sciencemag.org). Click on Science Professional Network, and then click on Career Workshops. An expert in the field of work force diversity will be available for the month of November to answer your questions.

We are searching for the brightest and best scientists to join our international research team. These scientists will devote themselves to the discovery and development of innovative products to conquer currently unmet medical challenges.

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Zeneca Pharmaceuticals

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Wilmington, DE 19850-5437
USA

Attn: Darla Wilson
Human Resources Department

Zeneca Pharmaceuticals

c/o Austin Knight UK Ltd.
98 King Street
Manchester M2 4WD
UK

Attn: Bill Cogle, Director
Consultancy Services

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The Science of Agricultural Genetics

RESEARCH MANAGER (Job #CP-808)

Crop Protection — Insect Control

A Research Manager is needed to play a central role in the development of insect resistant transgenic plants. This person will function as an integral part of a group with a broad range of responsibilities, ranging from discovery and characterization of insecticidal principles to expression of these principles in transgenic plants and characterization of such plants in terms of expression of the transgenes and resulting insecticidal activity. We currently have a need for a person with experience in protein structure-function interactions, particularly with insecticidal proteins. This person will participate in a program to engineer insecticidal proteins and interact with other researchers in this area. This position requires the ability to interact with numerous researchers, both internal and external to Pioneer. Minimum requirements are a Ph. D. + 4 years experience or M. S. and 7 years experience in the area of molecular biology or protein engineering. Good communication skills are imperative. The successful candidate preferably has experience working with insecticidal proteins and insect resistant transgenic crops. Alternatively, experience working with receptor-ligand systems and understanding the structural basis of the receptor-ligand interactions is sought. A high level of competence with routine procedures of molecular biology as well as an understanding of protein structure-function relationships and construction of chimeric proteins is a must. Application deadline: November 21, 1997.

SENIOR RESEARCH ASSOCIATE (Job # QT-802)

Quality Traits

We seek a highly motivated individual to join a project focused on manipulating carbohydrate composition of maize grain, with particular attention to starch and other polysaccharides. Qualified candidates will have demonstrated knowledge and skills in gene isolation/characterization (e.g., PCR, cDNA library construction, cloning and mutagenesis), systems for expression of proteins, and analyses of transgene expression in plants. Expertise in metabolic engineering and current molecular-biology-related technologies are desired, as well as experience with genome analysis. Related experience with protein chemistry will be viewed favorably, although not required. Extensive computer skills and an ability to work in an interdisciplinary research and product development team are essential. This position requires an M.S., or equivalent experience, in molecular biology/biochemistry or related field. Review of applications will begin immediately. Application deadline: November 21, 1997.

RESEARCH ASSOCIATE (Job #97-00162)

2 Positions

Pioneer Hi-Bred International, Inc. has two similar job openings to be focused on genetic mapping of the soybean and sunflower genomes. These positions will work in a team environment and may supervise others. Experience with genetic marker laboratory technologies, data management, and linkage analyses, as well as an understanding of qualitative and quantitative genetics, is desired. Communication skills will be important. Minimum requirements include a M.S., or a B.S. in plant sciences with significant experience and abilities. Applications received by November 15, 1997 will be assured consideration; however, later applications will be considered until the position is filled.

RESEARCH ASSOCIATE (Job #CP-805)

Crop Protection — Tissue-Specific Gene Expression

The successful candidate will join the gene expression team to carry out analysis of tissue-specific gene expression and protein localization in plants by in situ hybridization and immunohistochemistry. Desired qualifications include knowledge of plant morphology and histological techniques, microscopy skills, experience with molecular biology, including DNA and RNA analysis techniques, PCR, in situ gene expression and immunolocalization. Emphasis is placed on knowledge of plant biology and genetics, good organizational skills, high motivation, excellent written and verbal communication skills, and the ability to take initiative in ongoing technology improvements. Required computing skills include DNA and protein sequence analysis, DNA construct design and database analysis. Educational Requirements: M.S. or B.S./B.A. degree or equivalent in plant genetics, plant molecular biology or botany with 2-3 years of relevant experience in the fields of plant histology and molecular biology. Application deadline: November 15, 1997.

RESEARCH ASSOCIATE (Job #AB-808)

Analytical Biochemistry — Recombinant Protein Expression and Purification

This person will join a laboratory that is responsible for all aspects of recombinant protein expression and purification. Primary duties will include subcloning genes into expression vectors, optimizing expression conditions, developing purification/refolding schemes, and scale-up for preparative purification. Expression hosts currently used in the laboratory are E. coli and Pichia pastoris, and use of insect cells is likely. The successful candidate will interact with several research groups and will participate in the planning and implementation of experiments. Education/Experience: B.S. degree or equivalent in biochemistry, molecular biology or related field. Good pipetting skills, familiarity with sterile techniques, and scientific curiosity are required. Must also possess basic computer and instrumentation skills. The person must be detail oriented and very well organized. At least one year of labwork using protein and DNA techniques is required. Application deadline: November 21, 1997.

Pioneer offers an opportunity to interact among hundreds of scientists with diverse backgrounds. We offer competitive salaries and excellent, comprehensive benefits. Des Moines is a prospering heartland city that ranks well above the national averages in affordability and education. Our location provides a mix of beautiful open spaces and city life advantages. For confidential consideration send 3 copies of your resume and cover letter indicating job number to: Pioneer Hi-Bred International, Inc., Attn: PERSONNEL (Job #xx-xxx), P.O. Box 1004, Johnston, IA 50131-1004.

Pioneer Hi-Bred

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we are a publicly held
company that invests

more than \$115 mil-
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Undergraduate Scholarship Program (UGSP)

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

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

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

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

Interested students should apply if they:

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

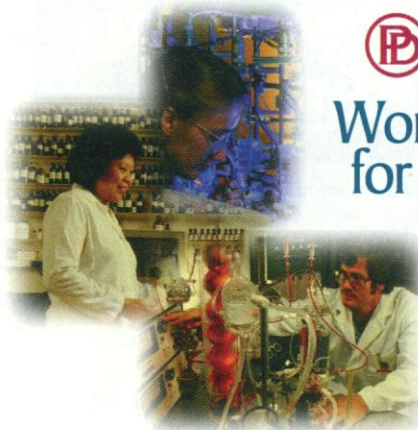
This is a special opportunity for special students.

For more information, contact

NIH/OD/OIR/OLRS
UGSP

7550 Wisconsin Avenue, Room 604
Bethesda, MD 20892-9121

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



PARKE-DAVIS World-Class Research for a Diverse World.

Today, more than ever before, diversity influences our work and the workplace. Leading the way with challenging opportunities and fresh perspectives for an expanding world market is Parke-Davis.

A division of Warner-Lambert, and a global force in the research and discovery of pharmaceutical products, Parke-Davis strives to attract the very best professionals from every field. In this endeavor, we offer a variety of programs and incentives that recognize and support the specific needs of individuals.

Headquartered in Ann Arbor, Michigan, Parke-Davis Pharmaceutical Research has the ideal location for living and working. A friendly city with world-class sophistication, Ann Arbor reflects an environment of charming neighborhoods and varying ethnic backgrounds. Here, one can enjoy all the advantages of big-city living—celebrated museums, live theater, beautiful parks, fine restaurants, art galleries, superb shops, one of the country's foremost educational institutions—the University of Michigan and its renowned Medical Center. Ann Arbor offers a tremendous variety of year-round activities. "Amiable, adventuresome, academic, artsy..." and all with an atmosphere that's both country and cosmopolitan, Ann Arbor is truly a unique combination of the best of all possible worlds.

Cultural Diversity

Parke-Davis has an expanding minority/women hiring program and a special council on cultural diversity to attract and retain colleagues that reflect the complex composition of its worldwide operations. We participate in the Consortium for Graduate Study that assists talented African-American, Hispanic-American and Native-American college graduates in pursuing successful careers in science.

Student Internship Programs

Parke-Davis offers on-the-job experience in research and extends an opportunity for future employment to those who excel. A diverse slate of opportunities and candidates ensure our company's growth and success for the future.

Family Friendly

We help colleagues balance career and family by offering specialized programs designed to meet the needs of both dual-income and single-parent households. Job-sharing, telecommuting, access to child-care and elder-care networks, flextime options—these are some of the work alternatives we provide so that more individuals have the opportunity to pursue rewarding careers.

Career Opportunities

Enjoy all of the above as part of the Parke-Davis' scientific team that will impact technology for the 21st century and beyond. **Here are two of 100+ positions** we currently have available at our Ann Arbor, MI location:

- Senior Scientist

As Laboratory Director of Behavioral Pharmacology, you'll conduct behavioral and physiological tests to determine in vivo CNS activity of drug candidates for use in psychiatric, neurodegenerative and neurological diseases. Requirements include a Ph.D. in Biological Science, 2-10 years' experience in neuroscience, behavioral pharmacology and neuropsychiatric diseases. Development of in vivo animal models for CNS diseases and an established record of scientific publications are also required.

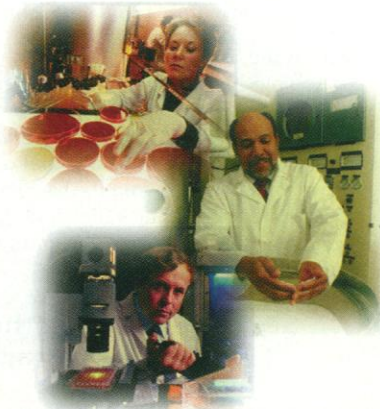
- Discovery Virologist

Discover and target elucidation of new antiviral agents against DNA viruses, along with planning, performing, collecting and analyzing related data. Experience in all aspects of laboratory virology, including DNA and herpesviruses, and advanced molecular biology techniques are essential. A degree in Virology, Microbiology or related biochemical field is required; a BS with 5 years' experience or a MS with 3 years' experience along with a record of productive research is desirable. A basic biochemical and immunological background is helpful.

We're truly committed to equal opportunity within an equally challenging and rewarding environment. Right now couldn't be a more exciting time to be part of the diverse future at Parke-Davis. To learn more about Parke-Davis Pharmaceutical Research and additional career opportunities, mail, fax or e-mail your resume to: Parke-Davis Pharmaceutical Research, Department 97-DIV, 2800 Plymouth Road, Ann Arbor, MI 48105. Fax: (313)998-3394. E-mail: resume@aa.wl.com

*Submit resume on laser-quality white paper, with legible 10 point or larger type, and avoid boldface, italics, borders, etc.

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Send nominations and applications to:

Richard Ross, 107 Beardshear Hall,
Iowa State University, Ames, Iowa 50011.
Applicants should send a letter of interest, experience and qualifications; a curriculum vitae; and names, addresses, and telephone numbers of five references. Review of applications begins December 1, 1997, and continues until position is filled.

The university is an equal opportunity/affirmative action employer.

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Located in the San Francisco Bay Area—close to Stanford University and near scores of biotechnology companies—Roche Bioscience is proud to offer competitive salaries and a full benefits package, which includes incentive bonuses, relocation assistance, 401(k) and pension plans. Our progressive environment also features an on-site Fitness Center and a nearby Children's Day Care Center to help our employees maintain the best possible quality of life. If you would like to explore our opportunities firsthand, apply today by sending your resume to: Roche Bioscience, 3401 Hillview Avenue, A2-HR, Job Code: SCI1031-LY, Palo Alto, CA 94304. Fax 415/424-8159.

**See our career opportunities on the www at:
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The MIT-WHOI Joint Program in Oceanography and Applied Ocean Sciences and Engineering NSF GRADUATE RESEARCH TRAINEESHIPS IN COASTAL OCEAN PROCESSES

The National Science Foundation has awarded five Graduate Research Traineeships in Coastal Ocean Processes to The Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program in Oceanography and Applied Ocean Sciences and Engineering for interdisciplinary research leading to the Ph.D. or D.Sc. in Oceanography or Ocean Engineering. We invite applications from individuals who are U.S. citizens or permanent residents and who have a Bachelors or Masters degree in a relevant discipline; e.g., Physics, Mathematics, Geology, Geophysics, Chemistry, Biology, Engineering and Oceanography. Women, minorities and individuals with disabilities are strongly encouraged to apply.

Some examples of the many interdisciplinary research areas are: Air-sea interactions in the coastal ocean; Biogeochemistry and effects of chemicals of environmental concern; Wetlands research; Ecosystem field studies and modeling; Coastal fisheries; Instrumentation for coastal ocean studies; Benthic processes and benthos-water column interactions; Rivers and the coastal ocean; Plankton dynamics.

For more information and application forms, please contact: **Education Office, MS 31 Woods Hole Oceanographic Institution Woods Hole, MA 02543-1541 Phone: (508) 289-2219 Email: mgately@whoi.edu**

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Medical Director, Smoking Control (Ref. #8020)
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Board certification preferred.



Data Management Coordinator (Ref. #8712)

B.S. and 5+ years' experience in pharmaceuticals required; MS preferred.

Biostatistician (Ref. #8713)

M.S. or Ph.D. in statistics and knowledge of SAS required.

Sr. Scientist, Oral Healthcare Product Research (Ref. #6041)

B.S. and 5+ years' directly related experience.

SmithKline Beecham offers a very competitive compensation and benefits package and a stimulating environment that rewards innovation. Please send your resume and salary requirements, indicating desired Ref. #, to: SmithKline Beecham Consumer Healthcare, Human Resources, 1500 Littleton Road, Parsippany, NJ 07054 or FAX (973) 631-8782. For more information on SmithKline Beecham, visit our Web site at www.sb.com/careers

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Opening for Chemical & Structural Biology and X-ray Crystallography

The Institute for Cellular and Molecular Biology and the Department of Chemistry/Biochemistry invite applications for a tenure track faculty position. Researchers from all areas of Chemical and Structural Biology are welcome, but those with experience in X-ray crystallography are particularly encouraged to apply. The successful applicant will be expected to develop an aggressive research program, to participate in undergraduate and graduate education, and to contribute to a dynamic and interactive academic atmosphere. The Institute for Cellular and Molecular Biology, headed by Dr. Alan Lambowitz, will be augmented by vigorous growth, including fourteen new faculty hires at both the junior and senior level, over the next few years. Exceptional start-up packages are available. Nestled in the Texas hill country, Austin is widely recognized as one of America's most beautiful and livable cities.

Candidates should submit a current curriculum vitae and a summary of research experience and future goals, together with at least three letters of recommendation to:

Dr. Jon Robertus
Co-Chair of the Search Committee
Department of Chemistry/Biochemistry
The University of Texas
Austin, TX 78712

or

Dr. Laurence Hurley
Co-Chair of the Search Committee
College of Pharmacy
The University of Texas
Austin, TX 78712



St. Jude Children's Research Hospital

ALSAC • Danny Thomas, Founder

POSTDOCTORAL POSITION SIGNAL TRANSDUCTION BY NEUROPEPTIDE RECEPTORS

A National Cancer Institute-funded postdoctoral position is available to participate in studies on signal transduction pathways activated by G protein-coupled neuropeptide receptors in brain tumors. The role of substance P and bombesin-like neuropeptide receptors in enhancing the growth of brain tumor-derived cells is being investigated using biochemical, pharmacological, and molecular approaches (see: Cancer Research 56: 4983-4991, 1996; Cellular Pharmacology 3: 441-449, 1996; Molecular and Cellular Endocrinology 130: 119-130, 1997; International Journal of Oncology 11: 797-805, 1997). Candidates should have a strong research experience and a recent Ph.D. in Molecular Biology, Cell Biology, Neuroscience, or related fields. Interest in signal transduction and brain tumor biology is a plus.

St. Jude Children's Research Hospital (Danny Thomas, Founder) is an outstanding research center for biomedical research and provides an exceptional environment for scientific achievement and career development. Stipend and benefits are highly competitive. Send a summary of research accomplishments (including copies of publications), curriculum vitae, and three letters of reference to: M. Sharif, Ph.D., Department of Molecular Pharmacology, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis, TN 38105.

Last date for receiving applications is three weeks after the appearance of this advertisement.

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Monterey Bay Aquarium Research Institute

Founded in 1987 by the late David Packard, MBARI is a non-profit, private oceanographic research institute, uniquely dedicated to the development of state-of-the-art equipment, instrumentation, systems, and methods for scientific research in the deep waters of the ocean. Located in Moss Landing, CA, the heart of the nation's largest marine sanctuary, MBARI places a balanced emphasis on science and engineering, with established programs in remotely operated vehicle (ROV) control technology, ocean physics, chemistry, geology, and biology, as well as information management, acoustics, and ocean instrumentation research and development. MBARI recently received delivery of its new SWATH Research vessel, the Western Flyer, and anticipates the near-future deployment of a technologically advanced ROV, Tiburon, taking unique research capabilities to depths of 4,000 meters. Additionally, MBARI fosters positive collaborative efforts with its sister institute, the Monterey Bay Aquarium, in research, education, and public information. MBARI offers a unique working environment for a productive, detail-oriented team player who is intrigued by the application of technology to ocean science.

For a glimpse of our current activities and employment opportunities, please visit our home page on the world wide web at <http://www.mbari.org>.

EOE

MBARI Welcomes Diversity

Traineeships in Oceanography for Minority Undergraduates

The Woods Hole Oceanographic Institution offers special educational opportunities in oceanography for minority undergraduate U.S. citizens or permanent residents. These awards are designed to provide training and research experience in Woods Hole for students who have completed at least two semesters of undergraduate study in physical or natural science, mathematics, or engineering and have an interest in marine sciences, oceanographic engineering, or marine policy.

Traineeships may be awarded for a ten to twelve week period in the summer or for a semester during the academic year and may be renewed the following year. The Trainee is paid a stipend of \$325 per week, plus a round trip travel allowance to Woods Hole. This program is conducted with support from and in cooperation with the Northeast Fisheries Science Center, National Marine Fisheries Service, NOAA and the Marine and Coastal Geology Program, Woods Hole Field Center, U.S. Geological Survey and with support from the Office of Naval Research.

Application deadline for Summer 1998 is February 14, 1998.

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Write for application forms to:
Education Office, MS #31
Woods Hole Oceanographic Institution
360 Woods Hole Road
Woods Hole, MA 02543-1541
or call (508) 289-2219
or email: mgately@whoi.edu



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Program for Minority Research Training in Psychiatry

The American Psychiatric Association and the National Institute of Mental Health announce the availability of funds to support minority psychiatrists pursuing careers in psychiatric research.

Medical students can receive stipends, travel expenses, and tuition for an elective or summer experience in a research environment. Psychiatric residents may engage in full-year research training during the last year of residency or in "year off" research training. Post-residency minority psychiatrists may receive stipends for one- or two-year fellowships.

Training takes place at research-oriented departments of psychiatry in major U.S. medical schools and other appropriate sites nationwide. A research mentor at the training site oversees the research training experience.

Application Deadlines: December 1 for residents seeking a year or more of training and for post-residency fellows; April 1 for Summer medical students who will start their training by June 30; or three months before training is to begin for medical students.

For more information contact the PMRTP (1-800-852-1390; E-mail PMRTP@psych.org) or write:

Ernesto A. Guerra
Office of Research
American Psychiatric Association
1400 K Street, NW
Washington, DC 20005

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We invite interested candidates to apply on-line using our resume builder at www.baxter.com. Or, you may mail/FAX your resume indicating area of interest to: **Baxter Healthcare Corporation, Hyland Division, Attn:**

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90039

FAX: (818)

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ASSOCIATE CHEMIST

Responsible for the synthesis, isolation and characterization of novel organic compounds as candidates for drug discovery in a variety of therapeutic areas. Ideal candidates will have a B.S. or M.S. in Chemistry or Medicinal Chemistry; industrial experience in Organic Synthesis helpful. Knowledge and experience with multi-step synthetic sequences of chromatographic purification and modern spectroscopic methods highly desirable. (Code 97-LAM-2895)

RESEARCH CHEMIST

Responsible for designing and synthesizing novel organic compounds for the interaction with specific biological systems. In this role, you are expected to independently design methods for the synthetic and characterization of these compounds. You are also expected to maintain expert knowledge of current literature in synthetic and medicinal chemistry, pharmacology and biochemistry. Ideal candidates will have a Ph.D. in Organic, Bioorganic or Medicinal Chemistry with demonstration of highly developed technical skills and in-depth knowledge of the scientific field. Postdoctoral experience which adds depth and breadth of experience is desirable. (Code 97-LAM-2522)

Make innovation your business at Abbott Laboratories. For consideration, please send your resume with salary history to: **Code (please insert from above), Dept. 0583, Bldg. AP9A, Abbott Laboratories, 100 Abbott Park Rd., Abbott Park, IL 60064.** An EOE, we are as committed to employee diversity as we are to our broad range of products and services.

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- The University of Massachusetts Boston seeks to hire a Director for the Graduate Program in Environmental, Coastal and Ocean Sciences (ECOS). The individual should be a well-established scientist with credentials commensurate with a senior-level appointment as Director of a multidisciplinary program that has significant commitments to graduate training, research, and professional service. The candidate should have a broad understanding of coastal and oceanic environmental problems and wide experience with environmental programs. The individual will supervise graduate students, participate in departmental teaching, and oversee a significant externally-funded research program. The successful candidate will be expected to provide the leadership to strengthen undergraduate course offerings by ECOS faculty. The Director will assume a leadership role in fulfilling the environmental mission of the campus, actively promoting collaborations across a broad spectrum of departments and institutes, and also work within the 5-campus UMass System to ensure that complementary strengths and mutually beneficial collaborations are developed. Please send cover letter, curriculum vitae, names, addresses and telephone numbers of three references to: **Office of Human Resources, University of Massachusetts Boston, Search 550-190, 100 Morrissey Blvd., Boston, MA, 02125-3393.** Application review will begin immediately and continue until the position is filled. An Affirmative Action, Equal Opportunity, Title IX employer.

U M a s s o s t o n

Minority Fellowship Program in Neuroscience Doctoral Fellowships Postdoctoral Fellowships Summer Program in Neuroscience Ethics and Survival (SPINES) at the Marine Biological Laboratory

Benefits

- Financial support for a period of up to three years (doctoral) or two years (postdoctoral)
- Travel to prospective training sites
- Partial travel support to the Society for Neuroscience meeting
- Summer Program in Neuroscience, Ethics and Survival (SPINES)

Eligibility Requirements

- American citizenship or permanent visa residency; and
- Enrollment in a full-time doctoral program in neuroscience

A goal of the program is to increase representation of African Americans, Alaskan Natives, American Indians, Mexican Americans, Pacific Islanders, and Puerto Ricans in neuroscience.

Application

For the doctoral program, applications are now being accepted and must be received by January 15, 1998; for the postdoctoral, January 15, 1998; for the SPINES program, by April 1, 1998. Funding is provided by the National Institute of Mental Health. This program is administered by the American Psychological Association and the Association of Neuroscience Departments and Programs. For information, write:

**The American Psychological Association
Minority Fellowship Program/Neuroscience
750 First Street, N.E.
Washington, DC 20002-4242
(202) 336-6027
E-mail: mfp@apa.org**



TENURE TRACK ASSISTANT PROFESSOR Developmental Biologist

The Department of Molecular Biology and Pharmacology at Washington University School of Medicine is recruiting individuals at the level of Assistant Professor on the tenure track. We are seeking an outstanding scientist working in the area of developmental biology. Special emphasis will be given to research involving systems where genetic tools can be used to address fundamental questions dealing with development. Faculty in the Department of Molecular Biology and Pharmacology utilize a broad range of organisms including yeast, *C. elegans*, *Drosophila*, and mice to investigate cell fate specification, pattern formation, and the regulation of cell proliferation, differentiation, migration, and death. (Visit our web site at <http://pharmdec.wustl.edu>.)

Interested applicants should forward a curriculum vitae and a short summary of research plans to:

Search Committee (c/o Jeffrey I. Gordon, Head)
Department of Molecular Biology and Pharmacology
Washington University School of Medicine
660 South Euclid Avenue, Box 8103
St. Louis, Missouri 63110

Applicants should also arrange to have three letters of recommendation sent to the same address.

Washington University is an Affirmative Action/Equal Opportunity Employer committed to increasing the representation of women and minority groups on its faculty.

FOX CHASE E.M. FACILITY MANAGER

Fox Chase Cancer Center in Philadelphia is seeking an Electron Microscopy Facility Manager. Assisted by an experienced technical specialist, the successful candidate will oversee the operation of an institutionally-supported core facility including two transmission electron microscopes, a scanning microscope, ultramicrotomes, vacuum evaporators, and ancillary equipment. He/She will establish a scientific interface with faculty members using model systems such as yeast, *C. elegans*, *Xenopus*, viruses, mice, and humans to study aspects of structural, molecular, cellular, and developmental biology; immunobiology; virology; and cancer biology. Research interests include protein-nucleic acid interactions; viral-host interactions, cellular structure and morphology, and intracellular trafficking.

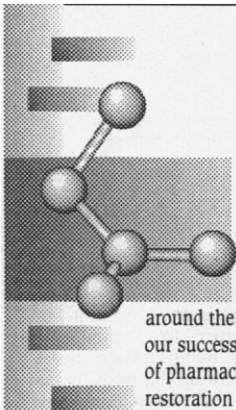
A Ph.D. degree and postdoctoral experience with conventional electron microscopy, immunoelectron microscopy, and/or cryoelectron microscopy-image reconstruction are required.

Please send a C.V., description of relevant experience and interest, and names of at least three references to: EM Search, c/o Dr. A.M. Skalka, Director, Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.

Information about Fox Chase Cancer Center is available at <http://www.fccc.edu>.

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Alcon Laboratories, Inc., a wholly-owned subsidiary of Nestlé, S.A., is a \$1.8 billion global leader in the research and development of the most complete line of pharmaceutical and medical device products in the ophthalmic and vision care industry. Our primary customers include ophthalmologists and optometrists around the world. We view scientific discovery as the cornerstone of our success. Our focus is innovation in the research and development of pharmaceuticals and medical devices for the preservation and restoration of vision.

Senior Scientist High Through-Put Screening

This individual will design, plan, conduct and validate receptor binding and functional assays to evaluate proprietary compounds, combinatorial libraries and natural products to support various drug discovery programs. Specific experience in conducting radioligand binding and second messenger assays, and sophisticated computer analysis of data are essential. Direct research experience with High Through-Put Screening and laboratory automation in an industrial setting is required. The successful candidate will have a Ph.D. in Pharmacology/Biochemistry with postdoctoral experience and three to five years of experience in the pharmaceutical industry. (Code: HTS)

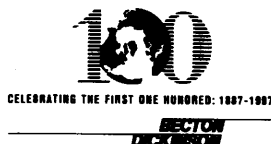
Scientist Molecular Pharmacology

The successful candidate will be responsible for implementing and using radioligand binding and functional assays to screen combinatorial libraries of compounds and analyzing data using specific computer programs. Experience with cell culture and receptor binding techniques is essential. Other requirements include an M.S. with thesis in Pharmacology/Biochemistry and three years of industrial/academic experience. (Code: SMP)

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- develop educational materials which both present Becton Dickinson and its products to the professional medical community and provide interpretations of scientific information to nonmedical BD employees.

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To qualify, you must be a BC/BE physician with both training and experience in clinical research. This training/experience should include the U.S. plus at least one other major region (e.g., Europe or Asia) and would ideally include exposure to or involvement in the pharmaceutical industry and the field of medication delivery. Specialty training would be thought valuable and demonstrated skill in clinical investigation is strongly desired. The candidate should be steeped in trends in technology with a global perspective and be able to recognize new product opportunities in both medical practice as well as to quantify device value in use. We seek someone who desires to make an impact on global healthcare but who maintains a spirit of humility. You should have strong oral and written communication skills and a strong competency for interpersonal skills.

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UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN**

The Department of Materials Science and Engineering at the University of Illinois at Urbana-Champaign invites applications for regular, full-time tenure-track or tenured faculty positions in Bio-materials and Polymers. To be considered for a tenured position, the applicant must have recognized national and international stature. Applications for a junior position are preferred and should have strong qualifications for teaching materials science and engineering at the undergraduate and graduate levels. Candidates will be expected to develop an outstanding research effort of their own. Successful candidates must have a distinguished record of accomplishment in one or both of the areas specified.

Applicants must hold an earned Doctorate in an appropriate field. Salary and rank will be commensurate with qualifications. The proposed starting date for this position is August 21, 1998, or earlier. All interested applicants are asked to provide a professional curriculum vitae including teaching experience, a list of publications, and an outline of a few pages describing their proposed program of research. Candidates for tenure-track positions should also request that three (3) letters of reference be sent directly to the department. Candidates for tenured positions should include the names, addresses, and telephone numbers of at least three (3) references. To ensure full consideration, applications must be received prior to January 31, 1998. Interviews may take place during the application period, but a final decision will not be made until after the deadline for applications.

Applications should be addressed to:

**Chair, Faculty Search Committee
Department of Materials Science
and Engineering
1304 W. Green Street,
Urbana, Illinois 61801
Telephone: (217) 333-1440
Fax: (217) 333-2736**

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

Director Health Sciences

The Institute of Medicine of the National Academy of Sciences is seeking candidates for a newly created position to head its Health Sciences Section. Incumbent will be responsible for all scientific, administrative, and financial affairs for two major Boards — Health Sciences Policy (HSP) and Neuroscience and Behavioral Health (NBH).

Incumbent will require advanced management, administrative, scientific, fund raising, and analytic expertise. Responsibilities include planning and managing programs and providing advice to the IOM President and Executive Officer on the major policy and operational matters. Responsibilities include program development and design of projects, proposal preparation and fund raising, recruitment and supervision of staff, preparing reports, and assuring the quality of staff products. Must exercise fiduciary responsibility for all projects within the Section, overseeing and ensuring the quality and quantity of all work. May also direct studies within the Section. Exercises judgment and decision making regarding projects, staff, reports, and the representation of the IOM in accordance with institutional policies. Manages staff and personnel issues with sensitivity, objectivity, and fairness.

Candidates should have a M.D., or Ph.D., related to health sciences research, health policy, neuroscience, or a health care-related field with at least 6 years of related experience. Excellent organizational and administrative skills required, with demonstrated oral and written skills.

Send resume to **Institute of Medicine, NAS 325 (KH), National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, DC 20418. For more information about the NRC, visit us at www.nas.edu. EOE.**

ASSOCIATION FOR CHEMORECEPTION SCIENCES (ACHeMS) TRAVEL FELLOWSHIPS

ACHeMS is pleased to announce the availability of fellowships for individuals interested in the chemical senses. **The minority and clinical fellowships** are funded by the National Institute on Deafness and Other Communication Disorders to defray cost of travel, meals, lodging, and registration to attend the twentieth meeting of AChemS, which will take place in Sarasota, FL April 22 to 26, 1998. The **ECRO fellowship** is offered to members of AChemS to help defray costs for attending the XIII congress of the European Chemoreception Research Organization in Sienna, Italy 8th–12th September, 1998.

Minority Fellowship: Students, postdoctoral fellows, and faculty who identify themselves with a minority group can apply for the minority fellowship. *Applicants need not be AChemS members, but must be U.S. residents.*

Clinical Fellowship: Resident clinicians (dentists and physicians) can apply for the clinical fellowship. *They need not be members of AChemS, but must be U.S. residents.*

ECRO Fellowship: This award is targeted to scientists who are starting an independent career in the chemical senses. Applicants must be members of the AChemS.

Awardees will be selected according to their academic background, experience, and research interests. Applicants are requested to submit a brief statement of research interests, vitae, two letters of recommendation, and, for the minority fellowship, an indication of the minority group with which they identify by January 15, 1998 to: **Travel Fellowship Committee, AChemS Business Office, 744 Duparc Circle, Tallahassee, FL 32312-1409.** Please indicate in your cover letter which fellowship you are applying for.

PHYSICISTS

Ernest Orlando Lawrence Berkeley National Laboratory currently has excellent opportunities available within the Accelerator Group of the Advanced Light Source (ALS), a third-generation light source now in its fourth year of operation. Both positions will participate in collaborative programs set up by the Group, both within the Lab and in other laboratories.

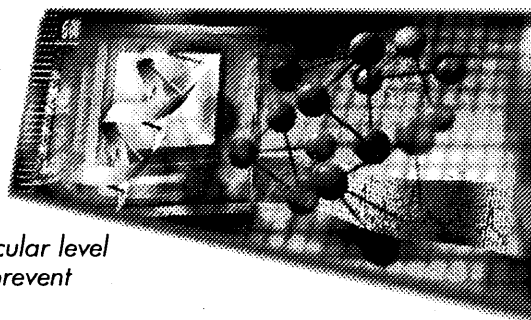
SENIOR STAFF PHYSICIST

In this highly visible role, you will focus on upgrading and extending the capabilities of the facility as well as direct a team of physicists, engineers and technicians on projects aimed at developing a detailed understanding of the ALS accelerators. The qualified candidate will investigate techniques for producing ultra-low emittance and/or ultra-short bunch length electron beams and publish/present results in journals and conferences. Requires a Ph.D. or an equivalent background in physics or a closely related field. Proven success in scientific publications reflecting expertise and research accomplishments in a relevant technical area is essential. You must have extensive knowledge and expertise in the following areas: management of accelerator construction and/or commissioning projects; particle beam dynamics, particularly as they relate to electron storage rings and/or electron linacs; theoretical and experimental skills in working with charged-particle handling devices; and the development and utilization of computer applications for accelerator design, data taking and complex data analysis. (Job# AFR5521/JSCI)

POSTDOCTORAL PHYSICIST, VISITING

This position is a one-year term appointment with the possibility of renewal. The selected candidate will develop diagnostic tools for the ALS accelerators, specifically, the storage ring diagnostic beamline that uses VUV and visible-radiation for electron beam diagnosis. You will also perform ongoing work to characterize the behavior of ALS accelerators. Qualified candidates must possess a Ph.D. (earned within the last 2 years) in Accelerator Physics or related area and a published record of work related to accelerator physics at a planned or operating accelerator facility. Requires proven success in one or more of the following areas: charged particle beam diagnostics, the development/utilization of computer codes for accelerator design, theoretical investigation of beam behavior and/or data gathering and analysis related to the physics of high-energy accelerators. (Job# AFR5523/JSCI)

Please send resume, indicating Job#, to: **Ernest Orlando Lawrence Berkeley National Laboratory, Staffing Office, Job# _____, One Cyclotron Road, MS 938A, Berkeley, CA 94720. FAX (510) 486-5870. E-mail: employment@LBL.gov.** Berkeley National Lab is an affirmative action/equal opportunity employer committed to the development of a diverse workforce.



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

RESPIRATORY AND ALLERGY DISCOVERY RESEARCH

AT SCHERING-PLOUGH

At the Schering-Plough Research Institute in Kenilworth, NJ, our scientists are discovering innovative therapies to treat respiratory and allergic disorders. If you are looking for the opportunity to join a leader in respiratory therapies in a state-of-the-art Drug Discovery Facility, we have the following outstanding opportunities:

ASSOCIATE SCIENTIST Pulmonary Research

We seek a scientist to be responsible for performing *in vivo* pharmacology experiments as part of our ongoing pulmonary research projects. To qualify, you will need a BS in Biology or a related field and 4-7 years of experience, or an MS and 2-4 years of experience. Background must include *in vivo* laboratory experience with all common techniques. Previous experience in inflammation research, cell biology and pulmonary physiology is especially desirable. Prior experience in the pharmaceutical industry is a plus. To be considered for this position, please reference Dept. DD71-70-BG.

POSTDOCTORAL FELLOW Allergy Research

We seek a scientist to be responsible for conducting research in the inhibition of inflammatory cell functions by using antisense and functional genomics technology in support of ongoing discovery projects in the allergy/asthma therapeutic area. This postdoctoral fellowship will provide the opportunity to generate novel, publishable data and conclusions. To qualify, you will need a PhD in Biochemistry with proven experience in molecular and cellular techniques. Direct experience with antisense techniques and/or functional genomics is highly desirable. To be considered for this position, please reference Dept. TM97-02-BG.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, referencing the Dept. Code for your position of interest, to: Schering-Plough Research Institute, MS #1250, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*



**Schering-Plough
Research Institute**

Using Science for Human Advantage



Innovative. Progressive. Responsive. This best describes our philosophy at Novartis Pharmaceuticals Corporation. Resulting from the merger of Ciba and Sandoz, Novartis is now the largest pharmaceutical company in the world. And we will continue to grow by discovering, researching, developing and manufacturing innovative prescription drugs that treat a wide variety of diseases and conditions (including organ transplantation, cardiovascular diseases, schizophrenia, cancer, epilepsy and arthritis)...we are helping millions of people live longer, healthier lives. To do this effectively, we are investing over \$1 billion annually in pharmaceutical research and development. We are also dedicated to providing a stimulating environment that is conducive to professional growth. We invite you to investigate the following opportunities at our state-of-the-art Summit, NJ location:

Postdoctoral Fellow- Arthritis Biology/Research

As a member of our Arthritis Biology/Research area, you will work on an independent research project aimed at further understanding of the role of inflammatory cytokines (including IL-1, TNF and IL-8) on the pathogenesis of osteoarthritis (in both animal models and human disease). This will involve applying standard immunohistochemistry, standard and in situ PCR, and related biochemical, immunological and molecular biological methods. Qualifications include a Ph.D in a biological science and experience with molecular immunology and molecular biology techniques, including in situ PCR. Our postdoctoral assignments, which encourage creative thinking and offer ample opportunities for publication and research presentations, are for one year and may be renewable for a second year by mutual agreement.

Attractive salaries and comprehensive benefits. You will find them all and much more at Novartis. Write your own prescription for success and apply today. **PRINCIPALS ONLY:** send your resume/curriculum vitae and letter of interest, indicating JNPD-062 on resume AND envelope, to: R&D Staffing, Novartis Pharmaceuticals Corporation, 556 Morris Avenue, Building G2, Summit, NJ 07901. Please indicate position code on resume AND envelope. We are an equal opportunity employer M/F/D/V. We appreciate your interest in our Company. Unfortunately, we will only be able to respond to those candidates chosen for interviews or additional follow-up.

STEM CELL BIOLOGIST

The Blood Center of Southeastern Wisconsin, an internationally recognized leader in blood related research and diagnostic laboratory testing, is developing a new endeavor in Stem Cell Biology. Our vision for a strong, nationally competitive program includes the integration of an outstanding basic research program, state-of-the-art clinical laboratory testing, and a close partnership with our hospitals, physicians, and academic programs. Two functional areas have been identified: One will involve basic research in areas broadly related to the cell and molecular biology of vascular cells, coagulation, hematopoiesis, signal transduction, molecular immunology, or transplantation. The second position focuses on the direction of the clinical Hematopoietic Stem Cell Processing Laboratory, which supports an autologous peripheral blood stem cell transplant program. *While we envision that these areas will require recruitment of two individuals, outstanding candidates with interest in building a program that covers both activities are especially encouraged to apply.*

Qualified research applicants will hold a Ph.D. or M.D. degree(s), will have national grant support, and will have research interests in stem cell biology, especially mechanisms of *ex vivo* self-renewal or directed differentiation. Qualified Director candidates will have a Ph.D. or other advanced degree and experience in one or more of the following areas: cell culture, cryopreservation, flow cytometry, cord blood banking, and stem cell phenotyping, processing, and preservation.

Significant opportunities exist for close affiliation with the Bone Marrow Transplant Program at the Medical College of Wisconsin and other regional autologous transplant programs.

Interested individuals should send a CV with a cover letter explaining current career goals, research interests, and expertise, along with the names of three references **no later than 1 December 1997** to:



The Blood Center
of Southeastern Wisconsin

Stem Cell Search Committee
Human Resources—#97-0648/0760
The Blood Center of Southeastern Wisconsin
P.O. Box 2178
Milwaukee, Wisconsin 53201-2178

Please see our Website: WWW.bloodctrwise.org
AA/EOE minorities and women are encouraged to apply



Senior Research Scientist (APPLIED MECHANICS) U.S. Army Research Office Research Triangle Park, NC

Applications are being accepted for Senior Research Scientist (Applied Mechanics), U.S. Army Research Office. The annual salary range is \$89,165-\$121,265 depending upon individual qualifications and salary history.

The incumbent conducts basic and applied research in the engineering and environmental sciences with special emphasis on mechanical and aerospace engineering including fluid dynamics, materials dynamics, solid mechanics, structures and dynamics, combustion science, propulsion and energy conversion, surface mechanics, tribology, and kinematics. Applies extensive knowledge of mechanical and aerospace engineering to a wide range of scientific and technical problems; enhances the Army key emerging technologies of advanced propulsion research through a variety of collaborative and consultative interactions; conducts original research and oversees the original research activities of small research teams. Provides a critical focus on key Army issues impacted by research programs that open new options for Army's basic engineering sciences research programs, and promotes the technology transfer of engineering sciences research into the Army's technical community and industry. Serves as an Army spokesperson in the engineering sciences community.

Applicants must show evidence of contributions and professional reputation in areas related to the work of the position through citations, patents, and publications which advance knowledge in the field; possess stature in the profession as indicated by memberships and activity in professional and scientific societies, honors, awards, and other recognition, and leadership in national and international scientific communities; and possess the ability to establish and maintain effective working relationships with key management and scientific personnel and advise and consult on scientific and technological programs. Applicants must have a Ph.D. in physics, or the engineering sciences such as mechanical engineering, aerospace engineering, applied mechanics, applied mathematics, civil engineering or equivalent doctoral degree related to the work of the position, or an equivalent combination of education and research experience (i.e., extensive publication in open literature and peer recognition as a researcher), and three years of professional experience.

Applicants must be U.S. citizens, be able to obtain a top secret clearance, and comply with provisions of the Ethics in Government Act.

Interested individuals may obtain a complete application package by calling Ms. Tammy Higgins, (703) 617-9415 or by writing to Commander, U.S. Army Materiel Command, ATTN: AMCPE-CS, 5001 Eisenhower Ave., Alexandria, VA 22333-0001. Applications must be postmarked by December 1, 1997.

**THE DEPARTMENT OF THE ARMY IS AN
EQUAL OPPORTUNITY EMPLOYER**

**DIRECTOR
Biomolecular & Biosystems
Science & Technology Division**

The Office of Naval Research (ONR) is seeking an outstanding individual to serve in this Civil Service position in the Senior Executive Service (SES). Salary range is \$94,800 to \$115,700 (plus locality pay) per year, depending on qualifications. In addition to salary, career SES appointees are eligible to compete for performance awards and bonuses. Filling of this position is subject to position allocation availability.

The Director, Biomolecular and Biosystems S&T Division is a key position in science and technology management in the Department of the Navy (DON) and the Department of Defense (DOD). The incumbent is responsible for managing and directing extensive activities in fostering, developing, administering and executing an integrated program of basic research, applied research and advanced technology development involving a wide range of life sciences, including biology, microbiology, biochemistry, biophysics, and numerous other related interdisciplinary fields. Significant portions of the incumbent's efforts involve identifying world-class scientists and engineers who can contribute to the research and development needs of DON and DOD and procuring the services of these scientists and engineers under contracts and grants. The incumbent's direction of the Division's programs involves the outlay of DON financial and human resources for science and technology and directly influences the character and capabilities of the Navy and Marine Corps of the future and the state of national science and technology knowledge and capabilities in the fields of science and technology which are under the cognizance of the Division.

Candidates must have progressive responsible and substantial experience (preferably with professional education at the doctorate level) in the performance and management of research, technology and/or developmental programs in biological sciences. This experience must be evidenced by such factors as recent publications, presented papers, invited talks, leadership roles in professional organizations, substantial growth in programmatic responsibility, etc.. Candidates must also have recent experience in the direct management and coordination of large integrated science and/or technology projects. Progressive and responsible experience in the performance or management of programs relating to biological sciences or chemical sciences of relevance to the Naval Forces is desirable.

Applicants are requested to complete the appropriate supplemental forms. Applicants may download a copy of the vacancy announcement from ONR's web site (<http://www.onr.navy.mil>). Those applicants who do not have access to the Internet, may request a copy of the vacancy announcement and supplemental forms from ONR's Vacancy Hotline (703) 696-0972. Hearing impaired applicants may use out TDD (Telecommunication Device for the Deaf) number (703) 696-6357. For additional information on applying for the position, please contact Sandra Weston on (703) 696-0383. For technical information concerning this position, applicants may call Dr. Ronald DeMarco on (703) 696-4408.

Applicants will be accepted through December 1, 1997 and must be received by that date. Interested persons should submit their application and supplemental forms to:

Office of Naval Research
Satellite Human Resources Office
Attn: Announcement #97-31(SCI)
800 North Quincy Street
Arlington, Virginia, 22217-5660.

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



THE INSTITUTE FOR DIAGNOSTIC RESEARCH, INC.

The Institute for Diagnostic Research (IDR) is a research and development organization committed to the discovery, development, and clinical validation of novel assays for diagnosis and monitoring of metabolic, cardiovascular, neuromuscular, and malignant diseases.

Located in a new, state-of-the-art facility in the shoreline community of Branford, Connecticut, IDR offers a relaxed, suburban living environment with easy access to New York City, Boston, and nearby Yale University. Combining excellent compensation and benefits with an exciting work environment, IDR seeks to attract and retain the finest professionals available.

Senior Assay Development Scientist

Project leader of a highly motivated, multidisciplinary team of biochemists and chemists. Directly responsible for initiating basic research programs leading to the identification of new diagnostic targets, the development of *in vitro* assays to these novel biochemical targets, and the validation of the analytical performance and clinical utility of these assays. Extensive assay development and validation experience is required.

Senior Conjugation Chemist

Group leader responsible for the generation and purification of covalently modified immunological or chemical reagents for use in the determination of biomarker quantity or activity. Experience in protein and nucleic acid conjugation chemistry is preferred. Experience in fluorochrome protein conjugation, enzyme-antibody conjugation, and chemiluminescent compound chemistry is also desirable.

Senior Molecular Biologist

Group leader responsible for research leading to the identification of new diagnostic targets and for the cloning, expression, and biochemical purification of these targets. A strong background in molecular biology with extensive experience in gene cloning, expression in prokaryotic and/or eukaryotic systems, and nucleic acid hybridization techniques is required.

All positions require a Ph.D. in biochemistry, immunology, or related chemistry program with 5+ years' diagnostic industry experience or a M.S. degree with 8+ years' industry experience. Must have a proven record of accomplishment (publications, patents, diagnostic products), superior communication/interpersonal skills, and a demonstrated ability to lead team efforts. If you would enjoy the challenge of breaking new ground in the diagnostics industry and having an impact on how medicine is practiced, please mail or fax your resume to:

James S. Backer, Ph.D.
Specialty Consultants Inc.
2710 Gateway Towers
Pittsburgh, PA 15222-1189
fax (412) 355-0498

IDR is an equal opportunity employer

THE 1998 LOUISA GROSS HORWITZ PRIZE

QUALIFICATIONS FOR THE AWARD

The Louisa Gross Horwitz Prize was established under the will of the late S. Gross Horwitz through a bequest to Columbia University, and is named to honor the donor's mother. Louisa Gross Horwitz was the daughter of Dr. Samuel David Gross (1805-1889), a prominent surgeon of Philadelphia, and author of the outstanding *Systems of Surgery*, who served as president of the American Medical Association.

Each year, since its inception in 1967, Columbia University has awarded the Louisa Gross Horwitz Prize for outstanding basic research in the fields of **Biology or Biochemistry**. The purpose of this award is to honor a scientific investigator, or group of investigators, whose contributions to knowledge in either of these fields is deemed worthy of special recognition.

The prize consists of an honorarium and a citation which are awarded at a special presentation event. Unless otherwise recommended by the Prize Committee, the prize is awarded annually. The 1997 awardee was Stanley B. Prusiner, M.D., Professor of Neurology and of Biochemistry and Biophysics at the University of California, San Francisco.

The Prize Committee recognizes no geographical limitations. The prize may be awarded to an individual or a group. When the prize is awarded to a group, the honorarium will be divided among the recipients, but each member will receive a citation. Preference will be given to work done in the recent past.

Prospective recipients should be nominated to the Chairman of the Louisa Gross Horwitz Prize Committee, Dr. Carol Prives. Nomination letters should include:

1. A summary, preferably less than 500 words, of the research on which this nomination is based.
2. A summary, preferably less than 500 words, of the significance of this research in the fields of biology or biochemistry.
3. A brief biographical sketch of the nominee, including positions held and awards received by the nominee.
4. A listing of up to ten of the nominee's most significant publications relating to the research noted under item 1.
5. A copy of the nominee's curriculum vitae.

An original and twelve (12) copies of each nomination should be sent to: Dr. Carol Prives, Chairman of the Louisa Gross Horwitz Prize Committee, Office of the Vice President for Health Sciences and Dean of the Faculty of Medicine, Columbia University, 630 West 168th Street, New York, New York 10032.

Deadline for the receipt of nominations is January 16, 1998.



Magainin Pharmaceuticals Inc.

... is a rapidly developing biopharmaceutical company engaged in R & D of pharmaceuticals against serious diseases. We are seeking a creative scientist to join our pharmaceutical discovery group as a Senior Scientist.

Senior Scientist

Selected candidate should be a cell and molecular biologist interested in creating and developing new biological assays for pharmaceutical discovery.

For consideration, please submit your curriculum vitae to **Human Resources, Magainin Pharmaceuticals Inc., 5110 Campus Drive, Plymouth Meeting, PA 19462. USA.** Magainin Pharmaceuticals Inc. offers excellent compensation and benefits. Equal Opportunity Employer. No phone calls please.

ASSISTANT PROFESSORSHIPS (TENURE-TRACK) UNIVERSITY OF VIRGINIA

The Department of Environmental Sciences invites applications for two Assistant Professorships (tenure-track). This interdisciplinary department includes faculty in hydrology, ecology, geosciences, and atmospheric sciences. Successful candidates will be expected to develop strong teaching and research programs that capitalize on the unique interdisciplinary nature of the Department.

ATMOSPHERIC SCIENTIST. The candidate should have a background in atmospheric dynamics with interests in atmospheric processes and their linkages between various scales of motion. Examples of this include, but are not limited to, surface atmosphere interactions (continents and oceans), atmospheric circulation of water vapor, and the dynamics and effects of tropospheric aerosols and trace gases. Teaching requirements include our core atmospheric sciences course for Environmental Sciences majors, a graduate-level core course, and other undergraduate and graduate-level courses appropriate for the overall program.

ECOLOGIST. The Department seeks a candidate with a broad background in ecophysiology or community ecology and experience and interest in both process- and organism-oriented ecology. Research and teaching interests in grasslands (terrestrial or coastal) are desirable, as is a strong experimental approach to research and the ability to teach introductory statistics. Teaching requirements will include a rotation in the introductory ecology course plus courses at the graduate and undergraduate level in the candidate's specialty.

Applicants should send one-page statements on their research and teaching interests and their experience, a curriculum vitae, and the names and full addresses of three references by December 31, 1997, to:

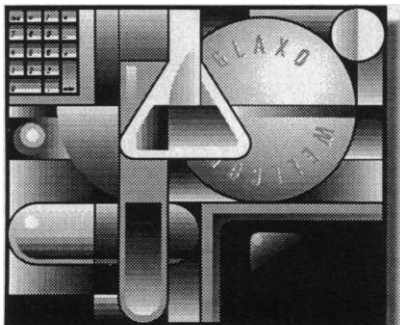
Dr. James Galloway, Chair
Department of Environmental Sciences
University of Virginia
Charlottesville, VA 22903
<http://atlantic.evsc.virginia.edu/EVSC>.

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

Position Announcement Vice President for Programs

Nonprofit marine conservation organization seeks a degreed professional with eight years of experience directing program activities to provide overall direction, coordination, and implementation of its programs. The successful candidate will have a primary leadership role in designing, implementing, and administering CMC's U.S. and international conservation programs, including the development of advocacy strategies and policy objectives, particularly with respect to domestic and international ecosystem protection programs. Must have the ability to incorporate the best available science in formulating CMC policy goals and demonstrate ongoing national and international leadership in advocating effective marine conservation policy. Demonstrated experience in the formulation and implementation of environmental policy in the Executive and Legislative branches of the Federal government. Extensive experience in international environmental policy development. Graduate degree in marine biology, law, or relevant academic field and field experience outside the U.S., particularly in the Caribbean directing *in situ* conservation programs, highly desirable. English/ Spanish fluency desired. Candidates should have a demonstrated commitment to marine conservation, combined with the energy and talent to advance effectively the organization's strategic plans and to implement its program objectives. Applicants send cover letter, résumé, and other relevant materials to: **CMC, c/o Charlotte Meyer, 1725 DeSales Street, NW #600 WDC 20036. EOE. NO PHONE CALLS PLEASE.**

There's Excitement In The Journey



**We're
Breaking
New Ground
in
Research &
Development**

Glaxo Wellcome, one of the world's largest pharmaceutical companies, is an organization committed to fighting diseases and bringing innovative medicines to patients throughout the world. If you would like to share our journey while testing the limits of your own potential, join us in one of the following openings at our Corporate Headquarters in Research Triangle Park, North Carolina.

CANCER BIOLOGY RESEARCH INVESTIGATORS

These individuals will participate in the identification of novel cancer therapeutics and the evaluation of research opportunities with a multidisciplinary team. Excellent leadership, communication, organizational and teamwork skills are required.

CANCER CELL BIOLOGIST

The candidate will perform and direct cell-based assays for compound evaluation, mechanism of action studies and target validation of novel cancer therapeutics. Requires a Ph.D. in the biological sciences with 3 year post-doctoral experience. Demonstrated experience in cell-based systems is required. Experience and knowledge of drug discovery is desirable. Preferred applicants will have a strong background in cancer biology, particularly in the areas of signal transduction, cell cycle or endothelial cell biology. Refer to Job # ASC4378-1 on all resumes.

IN VIVO CANCER BIOLOGIST

The candidate will perform, establish and direct this in vivo evaluation of novel cancer therapeutics. The individual will participate in mechanism of action and pharmacokinetics profile of active compounds; the development of in vivo models to support novel therapeutic targets; and assist in improving through-put of in vivo evaluation. Requires a Ph.D. in the Biological Sciences, 2 years postdoctoral experience and biochemistry background with experience in in vivo tumor models. Experience in angiogenesis, endothelial cell biology or management of chemotherapy-induced toxicity is highly desirable. Refer to Job #ASC3903-2 on all resumes.

SCIENTIST/RESEARCH SCIENTIST

The Department of Molecular Endocrinology is seeking a highly motivated Molecular Biologist to join the nuclear receptor project group. Candidate will work as part of a team to identify and characterize ligands for orphan nuclear hormone receptors. Requires a BS in Molecular Biology or related field and 3 years' experience in cloning and subcloning procedures, or an MS and one year of experience. Experience with protein expression, purification and mammalian cell culture techniques is highly desirable. Excellent organizational, communication and computer skills are required, as is the ability to work in a team environment. Refer to Job #ASC4385-1 on all resumes.

We offer excellent salaries and a comprehensive benefits package. For confidential consideration, send your resume, which must include position title/job# and salary history to: Human Resources Department, Glaxo Wellcome, P.O. Box 13398, Research Triangle Park, NC 27709. (No Phone Calls or Agency Referrals, Please). An Equal Opportunity Employer M/F/D/V.

GlaxoWellcome

You'll Learn. You'll Create. You'll Discover.



**St. Jude Children's
Research Hospital**

ALSAC • Danny Thomas, Founder

Career Opportunities at St. Jude Children's Research Hospital

St. Jude Children's Research Hospital, a premier research center for biomedical research, offers postdoctoral fellowship opportunities available in the basic and clinical sciences. Recent M.D., Ph.D., D.V.M. or Pharm.D. fellows are eligible to train with leading scientists in several basic biomedical research laboratories, including biochemistry, experimental oncology, genetics, experimental hematology, immunology, molecular pharmacology/structural biology/tumor cell biology and virology/molecular biology. Additional opportunities are also available in the clinical sciences, including infectious diseases, hematology/oncology, pharmaceutical sciences, pathology and laboratory medicine, radiation oncology, surgery, international outreach and diagnostic imaging. An interdisciplinary effort in cell and gene therapy has been initiated. SJCRH currently has 185 postdoctoral fellows funded from peer-reviewed grants, outside fellowships and institutional sources. Ten named fellowships are currently available.

Fellowship awards are given for up to three years and are based on merit, recommendation and the promise of a productive career in biomedical research. Stipends are highly competitive.

Applicants should provide a curriculum vitae, including a brief description of their research interests, and have three references. These should be forwarded to: Academic Programs, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38105. Ph: 901-495-2750. SJCRH is an Affirmative Action/Equal Opportunity Employer.



UNCF • MERCK SCIENCE INITIATIVE



UNDERGRADUATE

SCIENCE RESEARCH
SCHOLARSHIP AWARDS

- 15 Awards Annually
- Scholarships up to \$25,000
- Two Summer Internships at a Merck Research Facility

An applicant must:

- Be a full-time student at any four-year college or university
- Have junior year academic status
- Major in a life or physical science
- Have a minimum cumulative and major field GPA of 3.3 (4.0 point scale)

GRADUATE

SCIENCE RESEARCH
DISSERTATION FELLOWSHIPS

- 12 Fellowships Annually
- Fellowship Stipends up to \$25,000
- Department Grants of \$15,000
- Support for 12-24 months

An applicant must:

- Be enrolled full-time in a Ph.D. or equivalent doctoral program in a biomedical life or physical science
- Be within 2 years of completing dissertation research

POSTDOCTORAL

SCIENCE RESEARCH
FELLOWSHIPS

- 10 Fellowships Annually
- Fellowship Stipends up to \$40,000
- Department Grants of \$15,000
- Support for 12-24 months

An applicant must:

- Hold a Ph.D. or equivalent degree in a biomedical life or physical science
- Be appointed as a postdoctoral fellow during the 1998 calendar year at an academic or non-academic research institution (private industrial laboratories are excluded)

Applicants must be African American and U.S. citizens or permanent residents.

Applications must be postmarked by January 15, 1998

For application forms and more information, please contact your department chairperson or Jerry L. Bryant, Ph.D., by mail at *The College Fund/UNCF*, 8260 Willow Oaks Corporate Drive, P.O. Box 10444, Fairfax, VA 22031-4511, by fax (703) 205-3574, or by E-mail: uncfmerck@uncf.org

Visit our web site: www.uncf.org



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of Applied Life Sciences

Member of The Claremont Colleges
Claremont, California
Chief Academic Officer

With a generous founding grant of \$50 million from the W. M. Keck Foundation, the Keck Graduate Institute for Applied Life Sciences aims to lead an innovative integration of life science and engineering, focusing on applications that improve the human condition in knowledge, health, and productivity. Predominantly, KGI will offer professionally oriented Master's degrees, but it will also mount an innovative, interdisciplinary doctoral program. The Institute's goal is to welcome its first students in 1999, beginning on a small scale and building over five years to a first steady enrollment of 125 and a faculty of 14 to 16 FTE positions. During this period, KGI will raise an additional \$50-plus million in gifts and grants. A substantial portion of the total funding will be dedicated to endowment. The Institute is the seventh institutional member of The Claremont Colleges.

KGI will build on the profound insights of today's laboratories in biological processes and will focus on their application in processes, products, and procedures. It will select three or four areas of initial focus where it can build distinctive competencies, from among such fields as biochemical process engineering, bio-instrumentation, biomaterials, medical devices, bioinformatics, and biomechanics.

The Chief Academic Officer has the opportunity to partner with the founding President, Henry E. Riggs, to build a new college. S/he will provide leadership in the determination of KGI's academic programs; in the search for the founding faculty; in the creation of innovative curricula; in consultation with faculty; and in the definition of a new culture of governance, relationships with industry, and creative approaches to faculty appointments, service, and scholarship. Ideally, the successful individual will have experience in education and industry and be appropriately experienced and credentialed to lead, as Chief Academic Officer, a premier graduate school. S/he must have the zest and commitment to build a new venture, one designed to serve as a new model of collaboration between education and industry.

For more information about the Institute, visit KGI on the Web at: www.claremont.edu/KGI/. Please forward nominations and expressions of interest to: KGI, c/o Educational Management Network, 98 Old South Road, Nantucket, MA 02554. E-mail: kgi@emnemn.com.

Keck Graduate Institute is an Equal Opportunity Employer.



**Senior Research Scientist
(MATHEMATICAL SCIENCES)
U.S. Army Research Office
Research Triangle Park, NC**

Applications are being accepted for Senior Research Scientist (Mathematical Sciences), U.S. Army Research Office. The annual salary range is \$89,165-\$121,265 depending upon individual qualifications and salary history.

The incumbent conducts basic and applied research in the mathematical and computer sciences including nonlinear analysis, computational mathematics, stochastic analysis, discrete mathematics, computational algebra and geometry, intelligent systems, database science, and formal methods of software. Applies extensive knowledge of mathematical, computer, and computational sciences to a wide range of scientific and technical problems; forecasts mathematical and computer sciences research trends impacting progress in key Army emerging technologies; conducts original research and oversees the original research activities of small research teams. Provides a critical focus on key Army issues impacted by research programs that open new options for Army's mathematical and computer sciences research programs, and promotes the technology transfer of mathematical and computer sciences research into the Army's technical community and industry. Serves as an Army spokesperson in the mathematical and computer science community.

Applicants must show evidence of contributions and professional reputation in areas related to the work of the position through citations, patents, and publications which advance knowledge in the field; possess stature in the profession as indicated by memberships and activity in professional and scientific societies, honors, awards, and other recognition, and leadership in national and international scientific communities; and possess the ability to establish and maintain effective working relationships with key management and scientific personnel and advise and consult on scientific and technological programs. Applicants must have a Ph.D. in mathematics, physics, computer engineering, electrical engineering, or equivalent doctoral degree related to the work of the position, or an equivalent combination of education and research experience (i.e., extensive publication in open literature and peer recognition as a researcher), and three years of professional experience.

Applicants must be U.S. citizens, be able to obtain a top secret clearance, and comply with provisions of the Ethics in Government Act.

Interested individuals may obtain a complete application package by calling Ms. Tammy Higgins, (703) 617-9415 or by writing to Commander, U.S. Army Materiel Command, ATTN: AMCPE-CS, 5001 Eisenhower Ave., Alexandria, VA 22333-0001. Applications must be postmarked by December 1, 1997.

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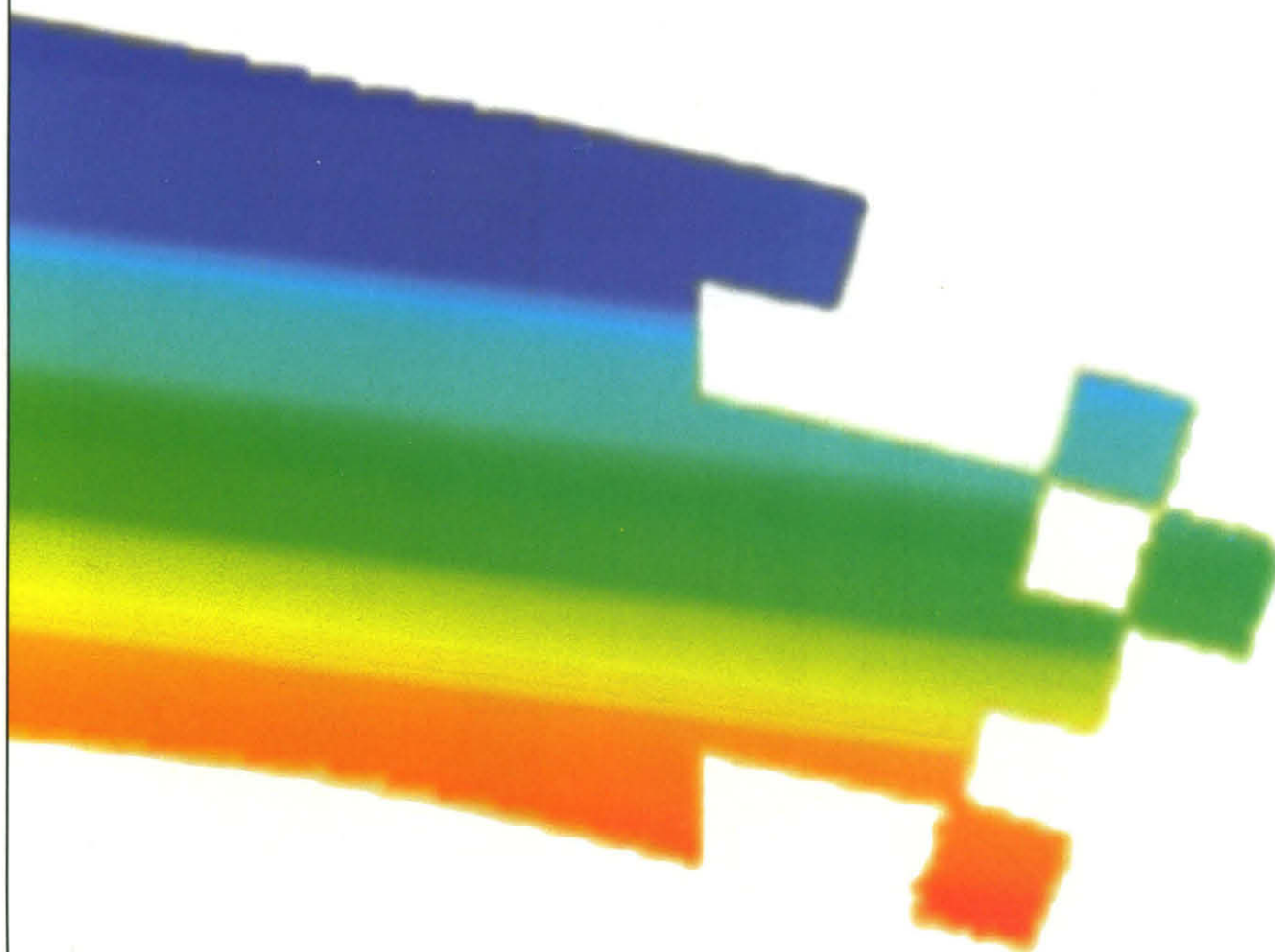
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The Charles A. Dana Foundation
Salutes The 1997 Winners of

The Charles A. Dana Award

for Pioneering Achievement in Health

The \$50,000 Award honors discoveries in neuroscience that will lead or have already led to significant advances in the diagnosis, prevention, or treatment of human health problems. By making these Awards, the Charles A. Dana Foundation wishes to highlight the significant impact that research in neuroscience can have on problems that cause incalculable human suffering, demonstrate the essential interrelationship between basic research and clinical progress, and set forth the urgency of further work.

Eric R. Kandel, M.D.

Columbia University and Howard Hughes Medical Institute

Paul Greengard, Ph.D.

The Rockefeller University

For fundamental discoveries in synaptic function—truly singular research that has significant implications in the study of learning and memory and the mechanisms of disease, with profound impact on helping us to understand how the brain works, that will ultimately change our lives.

The Charles A. Dana Foundation

David Mahoney, Chairman

Nominations for the 1998 Awards are now being solicited from the neuroscience community; the deadline for submission of the nominations is February 13, 1998. Information and application packets can be obtained from the Charles A. Dana Awards for Pioneering Achievements in Health, The Charles A. Dana Foundation, 745 Fifth Avenue, Suite 700, New York, New York 10151; telephone (212) 223-4040.



Research Assistant Position *Divisions of Gastroenterology and Laboratory Medicine*

Mayo Medical School, Clinic and Foundation

Postdoctoral position available immediately to study exfoliated stool markers for colorectal neoplasia and to assist in assay development. Expertise in immunochemical technique and cell biology required. Please submit curriculum vitae and three letters of recommendation to:

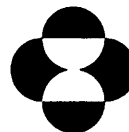
David A. Ahlquist, M.D.
Professor of Medicine
Division of Gastroenterology
Mayo Clinic
200 First Street SW
Rochester, MN 55905
FAX: 507/266-0350

*Mayo Foundation is an Affirmative Action and
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BIOCHEMIST

Merck Research Laboratories has an opening for a research associate in the Targeted Assay Group of the Natural Products Drug Discovery Division. The selected candidate will be responsible for developing assays, screening natural products and communicating results and coordinating efforts with other scientists. The candidate should possess a Bachelor's or Master's degree in Biochemistry or a related subject and 2 or more years of experience in protein purification, enzyme characterization and assay development. Good communication skills are required. Candidates must show appropriate documentation to work in the United States.

Merck Research Laboratories are located in Rahway, NJ, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For immediate consideration, send your resume and the names of three references to: **Manager, Human Resources, Merck & Co., Inc., AD#56, P.O. Box 2000, RY80-A3, Rahway, NJ 07065.** Merck is an equal opportunity employer.



MERCK
Research Laboratories

POSITIONS OPEN

TENURE TRACK FACULTY POSITIONS IN NEUROBIOLOGY

Department of Anatomy and Neurobiology
University of Maryland School of Medicine

The department is continuing to expand by recruiting new faculty in neurobiology. Appointments at the **ASSISTANT PROFESSOR** level are preferred, but especially qualified applicants at all ranks will be considered. We are located in new quarters that include state-of-the-art core laboratories in imaging, neurophysiology, neuroanatomy, neurosurgery, and molecular neurobiology. The department has an NIH Program Project Grant and a newly awarded Training Grant. Departmental faculty are members of the new interdisciplinary Neuroscience Program (website: <http://neuroscience.umaryland.edu>).

Successful candidates will have a Ph.D. or equivalent, evidence of productive and independent research, with potential for attracting extramural funding. We are particularly interested in candidates whose interests complement our strengths in developmental, cellular, and molecular neurobiology, and who can establish collaborative research programs. The search is focused in two areas: (1) Applicants using multidisciplinary approaches to analyze the functional organization of mammalian central neural networks. For example, chronic unit recordings during behavioral/learning tasks combined with genetic or pharmacological interventions to perturb specific elements of the circuit under study. (2) Applicants using contemporary molecular and cellular approaches to investigate development/plasticity or organization/function of mammalian central nervous system circuits. For example, use of targeted gene manipulations, combined with anatomical or functional imaging techniques, to analyze mechanisms underlying axonal guidance/targeting and/or neurogenesis/cell fate determination.

Faculty participate for three to five weeks in a team-taught medical school course. Salary and start-up packages are competitive. For best consideration, applications should be received before December 31, 1997. Candidates should submit a detailed curriculum vitae, a one-page statement of research achievements and goals, relevant reprints, and the names and addresses of three to five references to:

Dr. Asaf Keller and Dr. Matthew Ennis
Faculty Search Committee
Department of Anatomy and Neurobiology
University of Maryland School of Medicine
685 West Baltimore Street
Baltimore, MD 21201

We are eager to diversify our faculty. Women and minorities are encouraged to apply. The University of Maryland is an Affirmative Action/Equal Opportunity/ADA Employer.

COMPUTATIONAL MOLECULAR BIOLOGIST

Iowa State University (ISU) invites applications for a tenure-track **FACULTY POSITION** in computational molecular biology within the Department of Zoology and Genetics. The department includes active and collaborative research groups in genetics, molecular evolution, neurobiology, developmental biology, and integrative biology, and participates in a variety of exciting interdisciplinary research and graduate training programs with other departments. ISU strongly supports computational molecular biology in the biological sciences as well as in computer science, mathematics, statistics, and engineering. Applications are encouraged from individuals conducting research in areas such as: bioinformatics, genomics, functional and post-genomic analyses, molecular evolution, protein structure/function prediction, and rational enzyme design.

Candidates should have a Ph.D. and postdoctoral experience or equivalent, and will be expected to establish a nationally competitive research program and contribute to graduate and undergraduate education. The position includes excellent space, access to substantial computational facilities, discipline-competitive salary, and generous start-up funds. Deadline for applications is December 15, 1997, or until position is filled. Candidates should send curriculum vitae, description of current and planned research, selected reprints, and arrange for three letters of recommendation to be sent to: **Dr. D. Dobbs, Search Committee Chair, 1210 Molecular Biology Building, Iowa State University, Ames, IA 50011.** For more information, please see website: <http://www.public.iastate.edu/~ddobbs/job.htm> or contact E-mail: ddobbs@iastate.edu.

ISU is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are encouraged to apply.

POSITIONS OPEN

VICTOR K. LaMER CHAIR IN COLLOID AND SURFACE SCIENCE

Applications and nominations are invited for the position of Victor K. LaMer Endowed Chair at Clarkson University. The successful candidate will be expected to assume a leadership role in research activities at Clarkson in the area of colloid and surface science and participate in the education of students. The department housing the LaMer Chair is open and joint appointments are possible in appropriate cases.

Clarkson is a private technical university offering programs in Science, Engineering, Business, and Liberal Arts. Located in Potsdam, New York, the campus is close to the Adirondacks. Ottawa and Montreal are approximately two hours away by car, and Syracuse is two and a half hours away. Between Potsdam and Canton, which is 11 miles away, there are four institutions of higher education leading to a rich cultural atmosphere in both villages.

The position will be filled by approximately September 1, 1998. Applications received by February 2, 1998, will receive full consideration. Applications should include a résumé and the names of at least five references. The search will continue until the position is filled. All correspondence should be sent to: **Search Committee for LaMer Chair, Box 5700, Clarkson University, Potsdam, NY 13699-5700.** Inquiries may be directed to: **R. Shankar Subramanian at Telephone: 315-268-6648; FAX: 315-268-6654; e-mail: subraman@sun.soc.clarkson.edu.**

Clarkson University is a nondiscriminatory Equal Opportunity/Affirmative Action Employer and Employer.

Position Number: 26-47

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER FACULTY POSITIONS

The Department of Molecular Biology and Oncology at the University of Texas Southwestern Medical Center invites applications for tenure-track faculty positions in the areas of cell cycle, gene regulation, differentiation, and development. We are seeking interactive individuals to join a new department with strengths in developmental biology, molecular biology, and genetics. Successful applications should be capable of establishing a vigorous independent research program and teaching in one of several active graduate programs. Submit a curriculum vitae, a statement of future objectives, and names of three references to:

Eric N. Olson
Chairman
Department of Molecular Biology and Oncology
University of Texas
Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75235-9148

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CHEMISTRY FACULTY POSITION PENN STATE ERIE, BEHREND COLLEGE

Applications are invited for an expansion tenure-track **ASSISTANT PROFESSOR** position in chemistry for fall 1998. Applicants must have a Ph.D. in chemistry and a strong commitment to undergraduate teaching. Teaching responsibilities include analytical chemistry, instrumental analysis, and general chemistry. Preference will be given to candidates with research interests in experimental analytical chemistry, surface science, or another field complementing current faculty research. The successful candidate will be expected to establish a funded research program involving undergraduates. Penn State-Behrend is a four-year and graduate college offering the B.S. in chemistry. Applicants should send a curriculum vitae, undergraduate and graduate transcripts, teaching and research statements, and arrange that three references send letters to: **Dr. Roger Knacke, Division of Science, Department of CHEM-4, The Pennsylvania State University at Erie, Erie, PA 16563-0203.** Application deadline is November 17, 1997. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

POSITIONS OPEN

FACULTY POSITIONS DEPARTMENT OF ZOOLOGY AND WILDLIFE SCIENCE Auburn University

The Department of Zoology and Wildlife Science at Auburn University invites applications for two tenure-track positions at the **ASSISTANT PROFESSOR** level. **VERTEBRATE ZOOLOGIST.** Requires Ph.D. in biological science with strong training in vertebrate zoology, ichthyology, comparative vertebrate anatomy. Teaching responsibilities will include comparative anatomy of vertebrates, introductory biology, and graduate courses. A demonstrated ability to develop a competitive research program in comparative anatomy, systematics, and/or evolution of fishes is expected. The successful candidate will curate and seek funding for the Auburn University Fish Collection (less than 300,000 specimens). **ANIMAL COMMUNITY ECOLOGIST.** Requires Ph.D. in a biological science. Teaching responsibilities will include participation in introductory biology and development of graduate/undergraduate courses in the area of specialty. A demonstrated ability to develop a competitive research program in community ecology is expected; individuals with an interest in conservation biology are encouraged to apply. Successful candidates for both positions will be expected to develop active, extramurally funded research programs, direct graduate students, advise undergraduate majors, and participate in service activities. Postdoctoral experience and evidence of potential teaching excellence preferred. Send letter of application, curriculum vitae, one to two reprints, summaries of teaching philosophy/research plans, transcripts of all university courses, and three letters of reference by December 8, 1997, to: **Dr. Michael Wooten, Chair, Department of Zoology and Wildlife Science, 331 Funchess Hall, Auburn, AL 36849-5414.** Additional information is available at website: <http://www.ag.auburn.edu/~mwooten/position.html>.

Auburn University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

FACULTY POSITIONS NEUROBIOLOGY UNIVERSITY OF CONNECTICUT

The Department of Physiology and Neurobiology at the University of Connecticut, Storrs, anticipates two faculty positions to be available for Fall 1998 at the **ASSISTANT** or **ASSOCIATE PROFESSOR** levels. These are the first of several new faculty positions that the department expects to fill over the next few years. Successful candidates will be expected to maintain an independent and vigorous research program, and participate in the department's graduate and undergraduate programs. Research interests may be in any area of neurobiology that integrates with the expertise currently present in the department. Consult website: <http://cyclops.pnb.uconn.edu/facsearch.html> for descriptions of our research areas and information about our graduate and undergraduate programs. Applicants must possess a Ph.D. or equivalent, and have completed at least two years of postdoctoral training. Candidates for Associate Professor are expected to have a currently funded and active research program. Send a curriculum vitae, brief summary of current research with a statement of future research direction, and names of at least three references to: **Chair, PNB Search Committee, Department of Physiology and Neurobiology, The University of Connecticut, 3107 Horsebarn Hill Road, Storrs, CT 06269-4156.**

We encourage applications from underrepresented groups including minorities, women, and people with disability. (Search #s 98A77 & 98A78)

UNIVERSITY OF CALIFORNIA AT BERKELEY DEPARTMENT OF CHEMISTRY FACULTY POSITION IN CHEMISTRY

The Chemistry Department at the University of California at Berkeley solicits applications for a senior position as **PROFESSOR OF CHEMISTRY**, beginning in the fall of 1998. Creative and energetic candidates in nuclear/environmental chemistry with outstanding qualifications and sufficient experience in research and teaching are specifically sought. Candidates should send a curriculum vitae and synopsis of their research program to: **Chairman, Faculty Recruiting Committee (#246), Department of Chemistry, University of California, Berkeley, CA 94720-1460.** The deadline for receipt of applications is December 15, 1997. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

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Is an attractive opportunity for a motivated and dynamic individual, running anesthetized and conscious large animal laboratories in collaboration with other scientists involved in innovative cardiovascular drug discovery programmes. Publication in high repute journals is encouraged. Salary is commensurate with qualifications and experience. Relocation assistance is provided.

*Please send your application (CV, photograph, salary expectations, list of publications and 3 recommendations) under reference D20SCI, to **Pierre Fabre Médicament**, Parc Industriel de la Chartreuse, 81106 Castres Cedex, France.*

e-mail : crpf2@starway.tm.fr.

BDDP Corporate



UNIVERSITY OF MISSOURI-COLUMBIA

The Departments of Molecular Microbiology & Immunology and Veterinary Pathobiology seek to fill three full-time tenure-track faculty positions in Immunology. Candidates will be expected to develop a vigorous, externally funded research program, direct Ph.D. students and participate in teaching graduate and/or medical students.

1) **Assistant Professor(s):** Candidates should have a Ph.D. or equivalent degree with a minimum 3 years of relevant postdoctoral experience, significant publications and evidence of potential for a sustained commitment to high-quality research. One candidate should have experience in either reproductive immunology, host-pathogen interactions, immune evasion or immune tolerance.

2) **Assistant or Associate Professor:** Candidates should have demonstrated potential for maintaining an active, independent research program in Immunology as evidenced by quality publications and external funding. This individual will also serve as director of the Cell and Immunobiology Core Facility, part of the University of Missouri Molecular Biology Program, which provides tissue culture reagents, hybridoma production and flow cytometry to investigators.

Salary for these positions is competitive and commensurate with experience. Interested candidates should submit a curriculum vitae, statement of research interests and goals and the names, addresses and telephone numbers of at least three references to:

Dr. Helen B. Mullen, Immunology Search Committee, Department of Molecular Microbiology and Immunology, DC044.00, University of Missouri-Columbia, Columbia, MO 65212. Noncitizens please include visa status. Screening of applications will start 1 January 1998, and will continue until the positions are filled. The University of Missouri is an affirmative action-equal opportunity employer and encourages applications from females and minorities.

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www.researchmag.com/company/profile/cpicos.htm

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POSITIONS OPEN

SCHWENK DISTINGUISHED PROFESSORSHIP IN CHEMISTRY UNIVERSITY OF CONNECTICUT

Applications and nominations are invited for a Distinguished Professorship in Chemistry. The Schwenk Distinguished Professor will join the University of Connecticut in a commitment to establish a program of the highest caliber in both teaching and research. Coordinated with a major program of capital construction that includes a new Chemistry Building, the University seeks a distinguished teacher/scholar for appointment as the first Schwenk Professor of Chemistry. Any area of chemistry will be considered. The successful applicant must bring an impressive history of research accomplishment, an exemplary record of external research funding, and a strong interest and skill in both undergraduate and graduate teaching. The professorship offers a generous start-up package, annual resources from a substantial endowment, and a salary and benefits package commensurate with the position.

Complete applications should include a curriculum vitae, full description of existing personnel and financial resources including grant support, brief description of research goals for the next five years, description of teaching expertise and interests, and the names of at least three references. Send applications or nominations to:

Professor Gary A. Epling
Head, Department of Chemistry
University of Connecticut, U-60
215 Glenbrook Road
Storrs, CT 06269-4060

E-mail: epling@nucleus.chem.uconn.edu

Website: <http://www.lib.uconn.edu/chemistry>
Screening will begin January 10 and continue until the position is filled. *Women and minority candidates are encouraged to apply.* (Search #98A161).

FACULTY POSITION FRED HUTCHINSON CANCER RESEARCH CENTER

We are seeking to fill one ASSISTANT, ASSOCIATE, or FULL MEMBER position in the area of cancer genetics. The successful candidate is expected to develop an independent research program that exploits recent advances in the human genome project. We seek a candidate with interests in genome technology and in collaborating with population-based studies on the genetic basis of cancer. The position will be within the Division of Public Health Sciences, and will be part of a cross-disciplinary Genetics Program at the Fred Hutchinson Cancer Research Center with the opportunity for an affiliate appointment at the University of Washington. Candidates should send a curriculum vitae and a concise statement of their research plans, and have three letters of reference sent to:

Cancer Genetics Search Committee
Fred Hutchinson Cancer Research Center
1100 Fairview Avenue North, Mailstop: A2M-015
P.O. Box 19024
Seattle, WA 98109-1024

Application deadline: January 30, 1998.

Fred Hutchinson Cancer Research Center is an Equal Opportunity Employer committed to work force diversity.

CHAIR, DEPARTMENT OF NEUROSCIENCES CASE WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE

The School of Medicine at Case Western Reserve University invites applications for the position of Chair of the Department of Neurosciences. The Department was formed in 1989, and now has 12 primary faculty (two additional faculty are being recruited), with particular excellence in developmental neurobiology and in neural plasticity. In 1996, the Department ranked sixth in the nation for NIH grant support (the School of Medicine ranked tenth). For additional information, visit the Department's website: <http://neurowww.cwru.edu>. This is an exceptional opportunity to take a leadership role in a respected, thriving, and growing Department. If you wish to be considered as a candidate, please send a curriculum vitae to: **Dennis M. D. Landis, M.D., Chair, Search Committee for Neurosciences, Departments of Neurology and Neurosciences, School of Medicine E-604, Case Western Reserve University, Cleveland, OH 44106. Telephone: 216-844-3193; FAX: 216-844-5066; e-mail: ddl@po.cwru.edu.** *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer; applications are encouraged from members of underrepresented groups.*

POSITIONS OPEN

FACULTY POSITIONS IN MICROBIOLOGY UNIVERSITY OF MINNESOTA

The Department of Microbiology and the Biological Process Technology Institute at the University of Minnesota invite applications for two tenure-track positions in Microbiology at the ASSISTANT PROFESSOR level. Candidates carrying out research addressing important aspects of the biology of prokaryotes are urged to apply. We are particularly interested in outstanding candidates who will establish independent research programs in areas of microbial biology such as physiology, diversity, development, ecology, genetics, or pathogenesis. In addition, applicants for these positions should be well qualified to contribute to the teaching of general microbiology and prokaryotic structure, function, and metabolism in the undergraduate, graduate, or medical curriculum. Both of the individuals selected for these positions will hold their academic appointment in the Department of Microbiology. For more information about microbiology at the University of Minnesota, please visit our website: <http://www.microbiology.med.umn.edu>.

Minimum Qualifications: Ph.D. in microbiology or a related biological science discipline or an M.D. degree, plus postdoctoral experience. Closing date for applications is December 15, 1997, but early applications are encouraged and will be considered promptly. To apply, submit a curriculum vitae, summary of research interests and plans, and arrange to have three letters of recommendation sent to: **Gary M. Dunne, Ph.D., Search Committee Chair, Department of Microbiology, Medical School, University of Minnesota, Box 196, 420 Delaware Street S.E., Minneapolis, MN 55455.**

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

FACULTY POSITION IN ECOLOGY/EVOLUTION

The Department of Biological Sciences, University of Cincinnati, is continuing an enhancement of its research and teaching in the areas of ecology and evolutionary biology and announces the availability of a tenure-track position at the ASSISTANT/ASSOCIATE PROFESSOR level for the 1998-99 academic year. The individual is expected to develop a rigorous, externally funded research program, to interact with departmental faculty with similar interests, and to participate in directing graduate student (M.S. and Ph.D.) research in his/her specialty. Teaching duties will include participation in undergraduate/graduate course offerings in the area of ecology/evolutionary biology. We seek applications from qualified candidates in any area of ecology/evolutionary biology, and we are especially interested in those using quantitative and/or molecular approaches to address questions in conservation biology or plant-animal interactions. Applicants must have a Ph.D. or equivalent degree; postdoctoral experience will be advantageous. Applicants should submit a curriculum vitae, statement of research and teaching interests, and three letters of recommendation by December 15, 1997, to: **Dr. George W. Uetz, Chair, Ecology/Evolutionary Biology Search Committee, Department of Biological Sciences, University of Cincinnati, Cincinnati, OH 45221-0006. E-mail: george.uetz@uc.edu.** *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and persons with disability are encouraged to apply.*

CHARLES BABCOCK CHAIR OF BOTANY

The Department of Biology, Wake Forest University, invites applications and nominations for the Charles Babcock Chair of Botany. Applicants and nominees are expected to have an internationally recognized research program. Research interests and teaching philosophy should complement the existing departmental strengths as described at our website: <http://www.wfu.edu/Academic-departments/Biology/faculty/index.html>. Responsibilities will include teaching undergraduate and graduate courses, advising M.S. and Ph.D. students, and maintaining an active research program. Applications should include statements of teaching philosophy and research interests, a curriculum vitae, and names and addresses of three referees to: **Dr. Gloria K. Muday, Chair, Charles Babcock Chair of Botany Search Committee, Department of Biology, Wake Forest University, Winston-Salem, NC 27109-7325.** Review of applications will begin on January 15, 1998. *Wake Forest University is an Equal Employment Opportunity Employer and is strongly committed to increasing the diversity of its faculty.*

POSITIONS OPEN

FACULTY POSITION DIVISION OF RHEUMATOLOGY WAYNE STATE UNIVERSITY

The Division of Rheumatology, Department of Internal Medicine of Wayne State University invites applications for qualified Ph.D.'s for a faculty position, ASSISTANT/ASSOCIATE PROFESSOR level.

Successful candidates with expertise in cell biology and basic immunology should have a background in molecular immunology, epitope mapping, and hands-on experience in gene cloning and gene expression.

Applicants for Associate Professor level should have an ongoing extramurally funded research program and those at the Assistant Professor level should have the capability of obtaining external independent research support. Candidates should have skills and interest in teaching in the Department's core curriculum. Salary and rank commensurate with education and experience. Please send curriculum vitae, reprints of three recent publications, a one-page statement of future research plans, and the names of at least three preferred references to:

Felix Fernandez-Madrid, M.D., Ph.D.
Chief, Division of Rheumatology
Wayne State University, School of Medicine
Hutzel Hospital
4707 St. Antoine—1 Lobby Center
Detroit, MI 48201

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TENURE-TRACK FACULTY POSITIONS SIMON FRASER UNIVERSITY DEPARTMENT OF CHEMISTRY

The Department of Chemistry at Simon Fraser University invites applications for two tenure-track faculty positions at the ASSISTANT PROFESSOR level. One position is directed to the area of organic chemistry to begin September 1, 1998, and the other is open to all areas of chemistry to begin some time thereafter. Outstanding candidates with a commitment to excellence in research and teaching are being sought. The successful candidates will be expected to develop and maintain both an innovative, externally funded research program, and an excellent teaching record at both the undergraduate and graduate levels.

Applicants should send a complete résumé, a research proposal, and a list of three individuals willing to act as referees with their addresses, telephone and/or FAX numbers, and, if possible, e-mail addresses to:

Professor Ralph Korteling, Chair
Department of Chemistry
Simon Fraser University
Burnaby, British Columbia V5A 1S6 Canada
FAX: 804-291-5424

Evaluation of applications will be initiated December 1, 1997.

Simon Fraser University is an Equal Opportunity Employer and strongly encourages applications from women and minorities. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The appointments are subject to final budgetary authorization.

FACULTY POSITIONS DEPARTMENT OF MOLECULAR GENETICS

The Department of Molecular Genetics is seeking to fill two tenure-track faculty positions at the ASSISTANT PROFESSOR LEVEL OR HIGHER. We are seeking candidates with outstanding academic achievements in the areas of human genetics and mammalian developmental genetics.

The Albert Einstein College of Medicine is located in a suburban neighborhood in New York City, minutes from Manhattan and Westchester County, and provides a highly supportive and interactive research environment.

We offer a diverse set of shared facilities to promote the research programs of our faculty. Substantial packages will be provided to start up and sustain the laboratories of successful candidates. Candidates should send a curriculum vitae, a research plan, and request three letters of recommendation to be sent to: **Dr. Geoffrey Childs, Professor of Molecular Genetics, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.**

Albert Einstein College of Medicine is an Equal Opportunity Employer.

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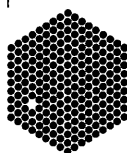
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EMBL

GROUP LEADER POSITIONS

The European Molecular Biology Laboratory, an international research organization with its headquarters laboratory housing several Research Programmes in Heidelberg (Germany), Outstations situated in Grenoble (France), Hamburg (Germany) and Hinxton (UK), and a Research Programme at Monterotondo (Italy), announces vacancies for three Group Leaders to head independent research groups in Heidelberg:

1. INTERDISCIPLINARY RESEARCH GROUP LEADER (ref. 97778)

As a matter of scientific policy and practice, EMBL encourages science-driven interaction of groups both within and between Programmes. We are interested in candidates whose research record spans disciplines and who could potentially reinforce interactions between the Gene Expression Programme and any of the other three major biology programmes (Developmental Biology, Cell Biology, Structural Biology). Two of many possible subject areas include the structure and functional organisation of the nucleus, or RNA localisation coupled to translation regulation; but we emphasize that this is an open search. EMBL is a dynamic and collaborative institute, and we are looking for an excellent scientist who will take full advantage of this. Further information can be obtained from Iain Mattaj, Meyerhofstrasse 1, D-69117 Heidelberg (e-mail: mattaj@embl-heidelberg.de).

2. GROUP LEADERS IN DEVELOPMENTAL BIOLOGY (2) (ref. 97779)

The newly formed Developmental Biology Programme focuses on development and regulation in animals and animal cells. Current group leaders use genetics and biochemical/molecular methods to address questions of pattern formation, cell interactions, cell polarity, signal transduction, growth control and cell differentiation. Further information on research activities in the programme can be obtained from the EMBL web page (www.embl-heidelberg.de) or from Stephen Cohen, EMBL, Meyerhofstrasse 1, D-69117 Heidelberg (e-mail: scohen@embl-heidelberg.de), or Dirk Bohmann, EMBL, Meyerhofstrasse 1, D-69117 Heidelberg (e-mail: bohmann@embl-heidelberg.de).

Applicants should submit a curriculum vitae, with a concise description of research interests, and should arrange for three letters of recommendation to be sent to the Personnel Section, quoting the respective reference number.

Applications should be received no later than December 15th 1997.

EMBL is an inclusive, equal opportunity organization and encourages applications from women, minorities and nationals of currently underrepresented member states. The laboratory provides financial help in relocating families and excellent child care is available.

EMBL Personnel Section, Postfach 10.2209, D-69012 Heidelberg, Germany.

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION IN STRUCTURAL BIOLOGY

The University of Texas at Dallas

The Department of Molecular and Cell Biology of The University of Texas at Dallas invites applications for a tenure-track **ASSISTANT PROFESSOR** (appointment at higher levels is possible) to begin 1 September 1998. Candidates with interests in any area of structural molecular biology or biophysics will be considered. The department is actively involved in basic research, graduate training at the doctoral level, and educating a select group of undergraduate students. Applicants should have at least two years of postdoctoral experience and show evidence of a vigorous and independent research program capable of obtaining external support. Teaching responsibilities will include participation in appropriate graduate and undergraduate courses. Review of applications will begin immediately and will continue until the position is filled. Forward curriculum vitae and short descriptions of research plans and teaching interests, and have three letters of reference sent to:

Academic Search #2030
The University of Texas at Dallas
P.O. Box 830688 M/S AD 2.3
Richardson, TX 75083-0688

The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer and strongly encourages applications from candidates who would enhance the diversity of the University's faculty and administration. Indication of sex and ethnicity for Affirmative Action statistical purposes is requested as part of the application but not required.

NON-TENURE-TRACK FACULTY POSITION CARDIOVASCULAR RESEARCH INSTITUTION (CRI)

East Tennessee State University

Applications are invited for a non-tenure-track position at the level of **ASSISTANT PROFESSOR**. The CRI is a new initiative in the College of Medicine and is aimed to bridge basic and clinical sciences in cardiovascular research. The appointment will be made in the Department of Pharmacology with a joint appointment in the Department of Internal Medicine. Preference will be given to candidates with strong records in cell and molecular biology/pharmacology within the context of cardiovascular research. The successful candidate, who must have a Ph.D. and/or M.D., is expected to develop an independent, externally funded research program. The position is contingent upon grant funding. Please send curriculum vitae, description of research interests, and the names and addresses of three references to:

Nae J. Dun, Ph.D.
Professor and Chairman
Department of Pharmacology
James H. Quillen College of Medicine
East Tennessee State University
Johnson City, TN 37614-0577

This position will remain open until filled. *East Tennessee State University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN MICROBIOLOGY. The Department of Microbiology at North Carolina State University (NC State) welcomes applications for a 12-month, tenure-track faculty position at the **ASSISTANT PROFESSOR** level. The successful candidate is expected to develop an independent research program in environmental/industrial microbiology competitive for extramural support, participate in the department's teaching program, and serve as an advisor to undergraduate and graduate students. We are interested in an individual capable of teaching the general microbiology course and graduate courses in his/her area of expertise. The Department of Microbiology has excellent facilities and enjoys interactions with other NC State departments, regional institutions, and biotechnology companies in the Research Triangle Park. Applicants must have a Ph.D. with at least two years of relevant postdoctoral experience. To apply, send curriculum vitae, reprints, statements of research and teaching interests, and names, addresses, telephone, FAX numbers, and e-mail addresses of three persons who may be contacted as references to: **Dr. Walter Dobrogosz, Chair, Faculty Search Committee, Department of Microbiology, Box 7615, North Carolina State University, Raleigh, NC 27695-7615.** Closing date for receipt of all materials is December 1, 1997, or until a suitable candidate is found. *North Carolina State University is an Equal Opportunity Employer and operates under Affirmative Action Policy. The University strongly encourages all qualified applicants.*

POSITIONS OPEN

DIRECTOR, GRADUATE PROGRAM IN MARINE BIOLOGY

Applications are invited for the Director of the M.S. Degree Program in Marine Biology at the University of Charleston, South Carolina. The program is housed at the Grice Marine Biological Laboratory at Fort Johnson on Charleston Harbor. The graduate faculty is diverse and comprises approximately 100 individuals from the University of Charleston and other Fort Johnson institutions including the Marine Resources Research Institute of the SC DNR, the Medical University of South Carolina, the Southeast Fisheries Laboratory of NOAA, and The Citadel. The eleven-month appointment carries faculty status at the **ASSOCIATE PROFESSOR** or **PROFESSOR** level in the Department of Biology at the College/University of Charleston. Candidates should have: (1) demonstrated scientific achievement as evidenced by publications and a record of externally funded research in marine biology; (2) teaching experience in graduate and undergraduate programs; (3) administrative experience, particularly in a marine laboratory/university setting. An earned Ph.D. is required. Applicants should submit by January 16, 1998, a curriculum vitae, recent publications, and the names, addresses, and telephone numbers of three references to: **Chair, Department of Biology, University of Charleston, Charleston, SC 29424.** Further information available at website: www.cofc.edu/~biology/biology.htm. *The University of Charleston is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

TENURE-TRACK FACULTY POSITION UNIVERSITY OF UTAH SCHOOL OF MEDICINE

The Division of Reproductive Sciences/Department of Obstetrics and Gynecology and the Department of Human Genetics are seeking applications for a tenure-track **RESEARCH SCIENTIST** position. Academic Rank: Open. Candidates should hold a Ph.D. or equivalent degree. The successful candidate is expected to join (by July 1, 1998) a growing division of reproductive sciences and to establish an independent, high quality, extramurally funded research program suitable for the training of Ph.D. candidates and Postdoctoral Fellows. Candidates with research interests in the general areas of reproductive biology, developmental biology, or reproductive molecular genetics/medicine are welcome to apply. Start-up funds as well as operational, technical, and secretarial support will be guaranteed for up to three years.

Curriculum vitae should be forwarded to:

Eli Y. Adashi, M.D.
Professor and Chair
Department of Obstetrics and Gynecology
University of Utah School of Medicine
50 North Medical Drive, 2B200
Salt Lake City, UT 84132

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

The St. George's University is situated on the beautiful island of Grenada in the West Indies. We invite applications to fill faculty positions in our School of Arts and Sciences—full-time or part-time—within the divisions of liberal arts, education, natural sciences, interdisciplinary science, and social studies, including courses in psychology, international business administration, sociology, and secondary education. Applicants must have a Ph.D. or D.Ed. degree with relevant teaching experience. As a university we are committed to excellence in "education" and seek to employ individuals with outstanding teaching credentials. Salary is in \$U.S. Applicants should submit their curriculum vitae to: **Mrs. Florient Johnson, Faculty Recruitment Coordinator, St. George's University, P.O. Box 7, St. George's, Grenada, W.I. Telephone/FAX: 473-444-3618.**

Howard University, **ASSISTANT PROFESSOR** positions in analytical and physical chemistry. Outstanding applications in other areas will be considered. Targeted areas include surface, interfacial, polymer, and laser chemistry. Applications should include a résumé and a brief statement of proposed research. Application and three letters of recommendation to: **Search Committee, Department of Chemistry, Howard University, Washington, DC 20059.** Evaluation of applicants will begin December 15, 1997, and continue until suitable candidates have been found. *Howard University is an Equal Opportunity/Affirmative Action Employer, and welcomes applications from women and minorities.*

POSITIONS OPEN

BIOENGINEERING FACULTY POSITION

The University of Illinois at Chicago, Department of Bioengineering, is inviting applications for full-time, tenure-track positions at the **ASSISTANT** and **SENIOR PROFESSOR** levels. Desired areas of interest include biomedical instrumentation, biological signal processing, medical imaging, biomaterials, biomedical visualization, biomechanics, and rehabilitation engineering. The Bioengineering Department offers B.S., M.S., and Ph.D. degrees, and has a strong emphasis on graduate training and research. The present enrollment is approximately 100 undergraduate and 50 graduate students. Additionally, an M.D.-Ph.D. program is offered jointly by the Bioengineering Department and the College of Medicine. This position must be filled by the fall of 1998. Please send a detailed curriculum vitae, reprints of publications, a statement of research interests, and the names of three references to:

R. L. Magin, Ph.D.
Chairman, Faculty Search Committee
University of Illinois at Chicago
Department of Bioengineering (M/C 063)
851 South Morgan Street, Room 1021 SEO
Chicago, IL 60607-7052

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

DEAN OF ARTS AND SCIENCES

The St. George's University is situated on the beautiful Caribbean island of Grenada. The University has approximately 900 students registered in the School of Medicine, School of Graduate Studies, and School of Arts and Sciences. The University is seeking a 'Dean' having proven abilities as a university teacher and administrator to oversee continued development of our new School of Arts and Sciences. The successful candidate must have a Ph.D. or equivalent degree from a recognized university, along with a minimum of three (3) to five (5) years of university administrative experience. The Dean reports to the Vice Chancellor, is responsible for the academic and administrative leadership, maintenance, and enhancement of innovative curricula within Arts and Sciences, and contributes to the development of the school and university.

Applicants should submit their curriculum vitae to: **Mrs. Florient Johnson, Faculty Recruitment Coordinator, St. George's University, P.O. Box 7, St. George's, Grenada, W.I. Telephone/FAX: 473-444-3618.**

FACULTY POSITION. The Department of Obstetrics/Gynecology at the University of Colorado Health Sciences Center in Denver, Colorado, invites applications for a faculty scientist position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level available July 1, 1998. Major responsibilities include development of an independent, externally funded research program on the clinical problems affecting women, with emphasis on molecular mechanisms. Minimal requirements include a doctoral degree (Ph.D., M.D., or equivalent) and two years of relevant postdoctoral experience. Submit curriculum vitae, description of research interests, summary of active and pending research grants, reprints of two or three major publications, and names of three professional references to: **Dr. Kimberly Leslie, Department of Obstetrics/Gynecology, Campus Box B-198, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262.** *The University of Colorado Health Sciences Center is an Equal Employment Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR ANIMAL DEVELOPMENTAL BIOLOGY CARLETON COLLEGE

Applications are invited for a tenure-track position in the Department of Biology. Teaching responsibilities include lecture/laboratory courses in introductory biology, animal development, and another area of expertise, preferably neurobiology. A junior/senior seminar and involvement in our senior integrative exercise are also expected. Successful candidates will develop a research program in developmental biology involving undergraduates. Send application, curriculum vitae, undergraduate and graduate transcripts, a statement of teaching philosophy, a summary of research, and three letters of reference to: **Susan Singer, Department of Biology, Carleton College, Northfield, MN 55057-4025.** Review of applications begins January 5, 1998. *Carleton College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.*

Bioscientist

Zeneca Pharmaceuticals, a worldwide leader in the discovery, development and marketing of innovative pharmaceuticals, has an opening for a Bioscientist in our U.S. research facility located in suburban Wilmington, DE.

This position is in our Target Discovery Department, where the major focus is to utilize genomic and bioinformatic tools to identify new targets for therapeutic intervention. The individual we seek will have at least a BS degree in biology or related field, and a minimum of 3-5 years' experience. Strong molecular biology and cell culture skills are required. Background must include all common molecular biological techniques such as molecular cloning, cDNA library construction and screening, polymerase chain reaction, and expression of cloned genes in prokaryotic and eukaryotic cells. Some familiarity with basic protein biochemistry would be a plus. Proven ability to work independently, and strong written and oral communication skills are essential.

Zeneca offers an excellent compensation and flexible benefits program, and opportunities for growth with one of the world's leading pharmaceutical research organizations.

For consideration, please send your resume to: **Darla Wilson, Human Resources, Code 664, Zeneca Pharmaceuticals, 1800 Concord Pike, P.O. Box 15437, Wilmington, DE 19850-5437.** An Equal Opportunity Employer M/F/D/V.

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Chair, Department of Biomedical Sciences

The Iowa State University College of Veterinary Medicine invites applications and nominations for the position of Professor and Chair of the Department of Biomedical Sciences. The Department had been recently restructured through merger of programs in anatomy, physiology, and pharmacology. The Department currently consists of 22 faculty positions, 9 professional staff, and 24 graduate students.

Candidates are expected to have a professional degree in medicine (D.V.M., M.D., etc.) and/or a Ph.D. Candidates with the D.V.M. and Ph.D. preferred. The candidate must be qualified for a tenured professorial position in the Department. In addition, candidates must possess strong interpersonal, communicative, and organizational skills, and the ability to network with other biomedical institutions, professional organizations, practicing veterinarians, and governmental agencies.

Please send nominations and applications to: **Dr. Don Reynolds, Chair, Department of Biomedical Science Search Committee, 2506 Veterinary Medicine, College of Veterinary Medicine, Iowa State University, Ames, Iowa, 50011,** or call **515/294-0914** for additional information. Women, minorities, and disabled persons are strongly encouraged to apply. Applicants are asked to submit a letter describing their qualifications, professional goals, and administrative philosophy relative to this position and a current curriculum vitae including a list of three references who may be contacted. Names of applicants will be kept confidential by the Search Committee, if requested. Applications will be accepted until January 15, 1998, or until the position is filled.

*Iowa State University is an Equal
Opportunity/Affirmative Action Employer.*

POST DOCTORAL SCIENTISTS

Excellent research opportunities are available at the Skin Research Center, located in Central New Jersey at the Johnson & Johnson Consumer Products Worldwide facility in Skillman.

SKIN PIGMENTATION

Work with a team of scientists conducting groundbreaking research, investigating the biology of skin pigmentation. You will contribute to the development of model systems, the study of molecules involved in the regulation of melanogenesis, and investigate keratinocyte-melanocyte interactions and their role in pigmentation.

Requirements: a Ph.D. in biological science, with a background in molecular and cellular biology.
Dept. 1658

SKIN/HAIR BIOLOGY

The Skin Biology Research Center is looking for scientists to join a group of investigators in the study of basic skin and hair biology with the goal of identifying new drug discovery targets. As a part of a team, you will be responsible for conducting hypothesis-driven mechanistic research on skin and hair biology. In an environment that strongly encourages publication, you will also participate in weekly journal clubs, contribute to research in progress reviews and an active lecture series.

Requirements: Ph.D. in biological science and training in the tools of molecular and developmental biology.
Dept. 1659

Please forward a scannable resume, noting appropriate department code to: **Dept #** of position of interest, Johnson & Johnson Recruiting Services, PO Box 16597, New Brunswick, NJ 08906-6597. An equal opportunity employer, m/f/d/v, committed to diversity in the workplace.

Visit us on-line at www.jnj.com for more information,

or to submit your resume electronically.

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POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST. The Department of Biology at the University of Toledo anticipates administrative approval for a tenure-track **ASSISTANT** or **ASSOCIATE PROFESSORSHIP** with appointment beginning fall 1998. The successful candidate will be expected to participate in undergraduate and graduate instruction, develop an externally funded research program focused on the use of molecular techniques to improve the value of crop plants, and assist in the development and expansion of a new multi-user, interdisciplinary Plant Research Center scheduled to open this spring. The Department offers B.S., M.S., and Ph.D. degrees. Research facilities include a state-of-the-art instrumentation center, new \$33 million Life Sciences Complex, and Lake Erie Research and Education Center. Salary, benefits, and start-up funds are competitive. Interested applicants with Ph.D. degree and postdoctoral experience should send a letter of application with statement of teaching and research interests, curriculum vitae, and names of three referees to: **Chair, Plant Search Committee, Department of Biology, The University of Toledo, Toledo, OH 43606.** Review of applications will begin December 10, 1997. *Women and minorities are strongly urged to apply. Minorities/Veterans/Disabled/Females. The University of Toledo is an Affirmative Action/Equal Opportunity Employer.*

ECOLOGIST. The Department of Biology at the University of Toledo anticipates administrative approval for a tenure-track **ASSISTANT** or **ASSOCIATE PROFESSORSHIP** with appointment beginning fall 1998. The successful candidate will be expected to participate in undergraduate and graduate instruction and develop an externally funded research program focused on the ecology of urban or land margin systems. The Department offers B.S., M.S., and Ph.D. degrees. Research facilities include a state-of-the-art instrumentation center, new \$33 million Life Sciences Complex, and Lake Erie Research and Education Center. Salary, benefits, and start-up funds are competitive. Interested applicants with Ph.D. degree and postdoctoral experience should send a letter of application with statement of teaching and research interests, curriculum vitae, and names of three referees to: **Chair, Ecology Search Committee, Department of Biology, The University of Toledo, Toledo, OH 43606.** Review of applications will begin December 10, 1997. *Women and minorities are strongly urged to apply. Minorities/Veterans/Disabled/Females. The University of Toledo is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR, BIOCHEMISTRY. Applications are invited for a tenure-track Assistant Professor of chemistry, effective September 1998, at the University of Missouri-St. Louis. The applicant must have a Ph.D. in the area of biochemistry, and postdoctoral experience is strongly preferred. The applicant is expected to excel at teaching at both the graduate and undergraduate levels and to develop a nationally recognized research program. The research area is open, but preference will be given to applicants with research interests in physical biochemistry or protein biochemistry. Additional information about the position and the Department can be obtained at website: www.umsl.edu/~chemist. The applicant should send a detailed résumé, research proposals, start-up requirements, and a summary of teaching interests, and arrange for three letters of recommendation to be sent to: **Dr. Wesley R. Harris, Biochemistry Search Committee, Department of Chemistry, University of Missouri-St. Louis, St. Louis, MO 63121.** Consideration of applications will begin on December 1st, but the position will remain open until filled. *University of Missouri-St. Louis is an Equal Opportunity/Affirmative Action Employer, and applications from women and underrepresented minorities are strongly encouraged.*

X-RAY CRYSTALLOGRAPHY. ASSISTANT or ASSOCIATE PROFESSOR, tenure-track. The new Center for Pharmaceutical Biotechnology invites applications in protein X-ray crystallography. Ph.D. and postdoctoral experience required. Responsibilities include developing a strong, externally funded research program, and teaching in graduate and professional programs. Successful candidate will have appointments within the Center and a College basic science department, and extensive collaborative opportunities in a major health sciences center. Forward curriculum vitae, description of research interests, and three reference letters to: **Dr. M. Johnson, Director, Center for Pharmaceutical Biotechnology, College of Pharmacy, University of Illinois at Chicago, Molecular Biology Research Building, 900 South Ashland—m/c 870, Chicago, IL 60607-7173.** For fullest consideration, submit full application by 31 October 1997. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ENVIRONMENTAL BIOLOGIST AND PLANT BIOLOGIST GEORGIA SOUTHERN UNIVERSITY

The Department of Biology, Georgia Southern University invites applications for two tenure-track positions at the **ASSISTANT PROFESSOR** level. Position starting dates are 1 August 1998. Salary is competitive and commensurate with experience and qualifications. Application postmark deadline for both positions is 5 December 1997. Ph.D. required at time of application. See website: <http://www.bio.gasou.edu/> for additional information about the department.

ENVIRONMENTAL BIOLOGIST. Postdoctoral experience preferred. Applicants must have broad training in areas related to environmental biology and have a commitment to teaching and scholarship. Preference will be given to individuals whose research area will strengthen a departmental emphasis in conservation issues in coastal plain and near-shore biology. Teaching responsibilities include environmental biology and upper-level courses in area of expertise. Send a letter of application, curriculum vitae, statement of teaching and research interests, and the names of three references to: **Dr. Ann E. Pratt, Chair, Search Committee #34920, Department of Biology, P.O. Box 8042, Georgia Southern University, Statesboro, GA 30460-8042 USA.**

PLANT BIOLOGIST. Postdoctoral experience is preferred. Applicants must have broad training in botany with a commitment to teaching and scholarship, and they must be qualified to teach general botany and advanced courses in their specialty. The specific area of research is open, but preference will be given to persons whose research complements a departmental emphasis in the Southeastern Coastal Plain. Applicants should send a letter of application, curriculum vitae, and statements of teaching and research interests, and have three letters of reference sent to: **Dr. Donald Drapalik, Chair, Search Committee #34921, Department of Biology, P.O. Box 8042, Georgia Southern University, Statesboro, GA 30460-8042 USA.**

The names of applicants and nominees, résumés, and other general non-evaluative information are subject to public inspection under the Georgia Open Records Act. *Georgia Southern is an Equal Opportunity/Affirmative Action Institution. Persons who need reasonable accommodations in order to participate in the application process should notify the search chair.*

BIOLOGY (two positions). Clinch Valley College of the University of Virginia, a four-year public liberal arts college located in the mountains of southwestern Virginia, invites applications for an **ASSISTANT PROFESSOR, TENURE-TRACK** position in biology and a **MENTOR** position in biology. The tenure-track position requires a Ph.D., the mentor position requires a Master's degree. Courses to be covered by the successful candidates will include introductory biology and a combination of at least two of the following: botany, (plant physiology, taxonomy), genetics, ecology, cellular biology, molecular biology, or vertebrate zoology. Review of applications will begin November 24, 1997, and continue until the position is filled. To apply, send a letter of interest, a curriculum vitae, and a list of at least three references to: **Biology Search Committee, Office of Human Resources, Clinch Valley College, 1 College Avenue, Wise, VA 24293.** For more information, visit our website: <http://www.clinch.edu>. *Clinch Valley College is an Affirmative Action/Equal Employment Opportunity/ADA Employer.*

QUANTITATIVE WILDLIFE ECOLOGIST/BIOMETRICIAN

The University of Montana Wildlife Biology Program seeks an entry-level **ASSISTANT PROFESSOR** in quantitative wildlife ecology/biometrics. The applicant should apply innovative analytical approaches and sampling design skills to research and teaching in ecology and conservation of wildlife populations and habitats.

A Ph.D. is required, postdoctoral experience preferred, with a strong biometrics background. Screening begins January 15, 1998. Submit curriculum vitae, research and teaching interests, recent publications, transcripts, and three reference letters (under separate cover) to:

**L. Scott Mills, Chair
Quantitative Wildlife Ecologist Search Committee
Wildlife Biology Program, School of Forestry
The University of Montana
Missoula, MT 59812
Telephone: 406-243-5552**

Equal Employment Opportunity/Affirmative Action.

POSITIONS OPEN

BIOLOGY AND SCIENCE EDUCATION

The Biology Department of Western Washington University invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level to begin September 1998. Applicants must have a Ph.D. in biological science and be committed to biology and the training of K-12 teachers. The successful applicant will teach introductory courses for biology majors, upper-division courses in the biological area of expertise, and methods and curriculum courses in the science education curriculum. The successful applicant will be expected to maintain an active program of biological research, and to seek extramural funding. The biology specialty is open. We encourage applications from those with experience in developing educational programs that use the natural environment as a classroom; training K-12 teachers; or conducting workshops for science teachers. The university is located in Bellingham, a city of 55,000. Situated between Seattle and Vancouver, British Columbia on the shores of Bellingham Bay in the foothills of the Cascade Mountains, a region of abundant forests, wetlands, rivers, and lakes. Supporting resources include study sites representing the rich diversity of Northwest Washington habitats, and a marine center approximately one hour from campus. Applicants should submit a curriculum vitae; concise statements of interests and accomplishments in both teaching and research; a transcript or list of science and science education coursework; the names, addresses, telephone numbers, and e-mail addresses of four references to: **Rich Fonda, Chair, Department of Biology MS-9160, Western Washington University, Bellingham, WA 98225. Telephone: 360-650-3992 (WA ST TTY RELAY: #1-800-833-6388); FAX: 360-650-3148; e-mail: fonda@biol.wvu.edu; further information at website: <http://www.wvu.edu/~biology.html>.**

We will begin reviewing applications on 26 November 1997, and the position will remain open until filled. *An Affirmative Action/Equal Opportunity Employer.*

PROTEIN CHEMIST ASSISTANT OR ASSOCIATE PROFESSOR VIRGINIA COMMONWEALTH UNIVERSITY Department of Biochemistry and Molecular Biophysics \$40,000 to \$70,000

The Department is seeking an excellent Protein Chemist. This is a tenure-track appointment at the Assistant or Associate Professor level. Applicants must hold the Ph.D. degree and have had at least two years of postdoctoral experience. The successful candidate will have already developed a strong, independent research program in a field requiring protein chemistry skills, and have obtained extramural funding. The successful candidate is expected to continue an excellent research program, train graduate students, collaborate with colleagues, and participate in the teaching programs of the department. Applicants should send a curriculum vitae, statement of research interests and future plans, and have three letters of recommendation sent, before January 1, 1998, to:

**Chairman, Search Committee
Position No. F 5413
Department of Biochemistry and
Molecular Biophysics
P.O. Box 980614
Virginia Commonwealth University
Richmond, VA 23298-0614**

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disability are encouraged to apply.

ASSISTANT PROFESSOR OF BIOLOGY. Angelo State University. Duties: Teach lectures and labs for human anatomy, human physiology, principles of biology, man and the environment, and human biology. Develop an inquiry-based collaborative learning course for freshmen biology majors, obtain external funding to aid in developing innovative educational methodologies; use information technology appropriately; assess student learning for the department. Qualifications: Ph.D. (other doctoral degrees may be considered depending upon experience) and primary interest in undergraduate education required. Demonstrated undergraduate teaching ability and formal training and/or extensive experience in inquiry-based learning. Submit letter of application, résumé, names, addresses, and telephone numbers of five professional references to: **Dr. Bonnie Amos, Department of Biology, P.O. Box 10890, Angelo State University, San Angelo, TX 76909. Website: <http://www.angelo.edu>.**



New York University

DEAN FOR SCIENCE

New York University seeks to appoint a Dean for Science. Reporting to the Dean of the Faculty, the Dean for Science is responsible for providing intellectual leadership and administrative management for the natural science departments, research centers, and laboratories in the Faculty of Arts and Science (FAS, comprising the College and Graduate Schools of Arts and Science), including oversight of faculty recruitment and development, budgets, research activities, and educational programs. These science departments have seen major development and expansion over the past several years. The Dean for Science is a member of the FAS and University Deans Councils, is responsible for development of institutional resources for support of the sciences, manages a substantial program of science facility development, acts as liaison for research collaboration and other interactions with research-related and general science initiatives of other Schools and units of the University, and helps represent FAS and the University to foundations and government agencies. The successful candidate will be a senior scientist with a distinguished record in research, substantive administrative experience, and an enduring interest in science education at all levels. The incumbent will hold a tenured appointment in one of the science departments and will be expected to maintain a continued presence as researcher and teacher. Candidates should send a statement of interest, complete CV and names and addresses of at least three independent referees to: **Dean for Science Search Committee, Office of the Dean for Science, New York University, 6 Washington Square North, New York, New York 10003.**

NYU encourages applications from women and members of minority groups.

BIOMEDICAL RESEARCH

SAIC Frederick, a division of Science Applications International Corporation and the world's largest employee-owned scientific, technical and engineering services company, is seeking seasoned professionals to join our team at the NCI's Frederick Cancer Research & Development Center located near Baltimore and Washington, DC, in scenic Frederick, Maryland. We are a contemporary biotechnology organization dedicated to the development of knowledge and tools for the diagnosis, treatment and prevention of human cancer and AIDS.

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- **Scientific/Technical Computing**

With several colleges nearby and our tuition assistance program, you have the opportunity to continue your education. **SAIC Frederick** offers a salary commensurate with credentials and an attractive fringe benefits program, including insurances, 401(k) savings plan, stock purchase programs, relocation assistance and more.

For consideration, forward CV, references and salary requirements to: **SAIC Frederick, NCI-FCRDC, ATTN: Barbara J. Norton-Gill, PO Box B, Frederick, MD 21702-1201; e-mail: hr@mail.ncifcrf.gov. EOE, M/F/D/V.**

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VIRGINIA TECH

BIOTECHNOLOGY FACULTY POSITIONS FRALIN BIOTECHNOLOGY CENTER

We are seeking **two** productive and innovative scientists. The ideal candidates will have a strong research record and a willingness to participate in cooperative research, teaching, and outreach initiatives. We are continuing to build in the area of **plant biotechnology**. We are particularly interested in **plant transgenics** as it impacts human or animal health or nutrition. Examples of relevant expertise include transgene expression systems, protein/glycoprotein processing, etc. The second position will be in any complementary area in biotechnology.

Office and laboratory space will be in Virginia Tech's new Fralin Biotechnology Center with access to its containment plant growth facilities, plant transformation, microbial fermentation, and downstream processing equipment. Join seven established faculty from various disciplines. Your faculty appointment can be in any of several relevant colleges and departments. Please examine our web page for more details and photos of our exceptional facility, the university, and area.

Qualified applicants should send a complete curriculum vita, summary of research interests, and names and addresses of three references by **Dec. 1, 1997 (or until positions are filled)** to the attention of:

Mr. Don Ball
Fralin Biotechnology Center
Virginia Tech
Blacksburg, VA 24061-0346
Phone: 540-231-6933
Fax: 540-231-7126
E-Mail: biotech@vt.edu

Web site: <http://www.biotech.vt.edu>

Virginia Tech is an equal opportunity employer.



Assistant Professor Department of Chemistry University of Minnesota, Duluth

The Department of Chemistry is seeking candidates for a tenure-track professor position in the area of **biochemistry and molecular biology** effective September 1, 1998. The successful candidate will:

- contribute effectively to departmental teaching and advising responsibilities at the undergraduate and graduate levels;
- develop an externally funded research program in biochemistry and molecular biology involving undergraduate and graduate students;
- fulfill normal service obligations.

Opportunities exist to collaborate with faculty and teach students in the UMD School of Medicine. Applications will be reviewed starting December 15 and will be accepted until the position is filled. A Ph.D. in chemistry, biochemistry or related field, postdoctoral experience, and evidence of a commitment to teaching are required. A Ph.D. in chemistry or biochemistry and postdoctoral experience at a major research institution are desired. Send an application letter, CV, a short research proposal, and have three letters of recommendation sent to:

Dr. Larry C. Thompson
Department of Chemistry
University of Minnesota, Duluth
10 University Drive
Duluth, MN 55812
www: <http://www.d.umn.edu/chem>
Fax: 218/726-7394

E-mail: lthompso@d.umn.edu

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

POSITIONS OPEN

BIOCHEMIST AND VIROLOGIST TWO TENURE-TRACK POSITIONS AT THE UNIVERSITY OF MONTANA

The Division of Biological Sciences invites applications for two tenure-track positions at the **ASSISTANT/ASSOCIATE PROFESSOR** level, to begin fall 1998.

Biochemist: research focus on interactions between nucleic acids and proteins (or other macromolecules), preferably in eukaryotic systems. Teaching expectations are undergraduate and graduate courses in biochemistry including a graduate-level course in nucleic acids biochemistry.

Animal Virologist: research focus on molecular-cellular aspects of virology in animal systems. Teaching expectations are undergraduate and graduate courses in virology.

Successful candidates for both positions are expected to develop vigorous, externally funded research programs; direct graduate students; and contribute to the undergraduate research program. Requirements are a doctoral degree, record of research accomplishments including postdoctoral experience, and teaching experience. Preference will be given to candidates whose research interests complement current emphases in the program ([website: http://www.umt.edu/biology/dbs](http://www.umt.edu/biology/dbs)). Send letter of application, curriculum vitae, statement of research goals and teaching interests, and three letters of reference to: **Biochemistry Search Committee** (deadline December 15, 1997) or **Virology Search Committee** (deadline January 5, 1998), Division of Biological Sciences, The University of Montana, Missoula, MT 59812. Telephone: 406-243-5122; FAX: 406-243-4184. Only completed applications will be considered. *The University of Montana is an Affirmative Action/Equal Opportunity Employer and encourages applications from women, minorities, Vietnam-era veterans, and persons with disability.* This position announcement can be made available in alternative formats upon request.

ASSOCIATE PROFESSOR OR FULL PROFESSOR OF ENVIRONMENTAL SCIENCE COORDINATOR FOR THE SCIENCES College of Science Washington State University Vancouver

Washington State University (WSU) seeks an Environmental Scientist to lead the development of its undergraduate and graduate degree programs in science at WSU Vancouver (one of four WSU campuses). Ph.D. in an appropriate science; specialty open but prefer such areas as biogeochemistry, hydrologic sciences, ecosystem ecology, environmental chemistry. Successful externally funded research program and ability to plan and administer academic programs required. Preferred qualifications: administrative experience and teaching experience; ability to teach courses in environmental assessment. WSU Vancouver (across the river from Portland, Oregon) currently has 1,300 upper-division and graduate students; enrollment and the faculty are projected to double in size in the next six years and double again by 2010, with the sciences and engineering a priority. Research expectations and teaching loads are consistent across the four WSU campuses; WSU is a Tier I research institution. Competitive salary and start-up package. The Pacific Northwest offers significant opportunities for collaboration, and excellent quality of life. Submit cover letter describing programs and detailed résumé including names, addresses, and telephone numbers of at least three references to: **Dr. Tim Hunt, Associate Dean, Washington State University Vancouver, 14204 N.E. Salmon Creek Avenue, Vancouver, WA 98686.** Closing date December 15, 1997. Nominations encouraged (by December 5, 1997). *Washington State University is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members of ethnic minorities, women, Vietnam-era or disabled veterans, persons of disability, and/or persons between the ages of 40 to 70 are encouraged to apply.*

The Department of Medicine at Brigham & Women's Hospital and Harvard Medical School invites applications for a faculty position at the **ASSISTANT PROFESSOR** level. Qualified applicants should have Ph.D., M.D., or an equivalent degree and be experienced in NMR spectroscopy of small animal hearts. Successful candidates should have a funded research program in bioenergetics in heart failure and be willing to develop new programs using molecular biology and/or small animal models of cardiac hypertrophy and failure. Send curriculum vitae, a brief statement of research plans, and names and addresses of three potential referees to: **J. S. Ingwall, Ph.D., Brigham & Women's Hospital, 221 Longwood Avenue, Room 247, Boston, MA 02115.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR POSITION INVERTEBRATE BIOLOGIST

The Department of Biology at the College of William and Mary invites applicants for an entry-level tenure-track faculty position to begin fall, 1998. The person we seek must be a broadly trained Invertebrate Biologist whose primary teaching assignment will be an undergraduate invertebrate biology course with accompanying laboratory. Other teaching duties include advanced courses in the area of specialty, and may include participation in introductory-level courses in the future. Due to the proximity of the Chesapeake Bay and the opportunity for collaboration with scientists in the School of Marine Sciences, preference will be given to those studying marine organisms. In addition to a commitment to excellence in teaching, the successful applicant will be expected to establish a vigorous extramurally funded research program. Preference will be given to applicants with appropriate postdoctoral experience. The University has an enrollment of 6,800 students (5,400 undergraduates) among five schools. The department has 21 faculty and offers training through the Master's level. Applicants should include a curriculum vitae with a publication list, a statement of teaching and research interests, and the names, addresses (including e-mail), and telephone and FAX numbers of three individuals willing to submit letters of reference upon request. Application materials should be sent to: **Norman J. Fashing, Chair, Search Committee, Department of Biology, College of William and Mary, Williamsburg, VA 23187-8795.** Review will begin January 20, 1998, and continue until the position is filled. *The College of William and Mary is an Equal Opportunity/Affirmative Action University. Members of underrepresented groups are encouraged to apply.*

ASSISTANT PROFESSOR BASIC PHARMACEUTICAL SCIENCES

The Department of Basic Pharmaceutical Sciences of the West Virginia University Robert C. Byrd Health Sciences Center School of Pharmacy invites applications for a 12-month tenure-track position at the Assistant Professor level. We are especially interested in recruiting an individual with research interests in drug discovery and development including one or more of the areas of computational chemistry, novel drug delivery systems, drug metabolism, or free radical biology. Individuals with experience using selected techniques of the disciplines of molecular biology, pharmaceuticals, medicinal chemistry, or analytical chemistry will be given preference. The successful applicant will be expected to develop and maintain an extramurally funded research program and to participate in interdisciplinary research initiatives. Teaching in the professional program and Ph.D. program is required. The position requires a Ph.D. degree, or equivalent, and postdoctoral experience. Review of applications will begin on or about January 1, 1998, and the search will continue until the position is filled. Applicants should send a curriculum vitae, a letter outlining their research plans, and names and addresses of three references to: **Dr. Patrick Callery, West Virginia University, Basic Pharmaceutical Sciences, P.O. Box 9530, Morgantown, WV 26506-9530.** Website: <http://www.hsc.wvu.edu/sop/>; e-mail: pcallery@hsc.wvu.edu. *An Equal Opportunity/Affirmative Action/ADA Employer.*

ANIMAL PHYSIOLOGY UNIVERSITY OF UTAH

The Department of Biology seeks applications for a tenure-track position in animal physiology at the **ASSISTANT PROFESSOR** level. We are interested in Physiologists with postdoctoral experience who work at the system and organismal levels but are also able to relate their research to broader issues in evolutionary biology. Ours is a large, integrated biology department with strength in many areas, including functional and evolutionary morphology and neuroethology. Applicants should submit their curriculum vitae, statement of research and teaching interests, copies of two or three recent publications, and should arrange to have three letters of recommendation sent to: **Animal Physiology Search Committee, Department of Biology, 257 South 1400 East, University of Utah, Salt Lake City, UT 84112.** Review of completed applications will begin December 1, 1997, and will continue until the position is filled.

The University of Utah is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

POSITIONS OPEN

REPRODUCTIVE ECOLOGICAL PHYSIOLOGIST

The Department of Biology, San Francisco State University, seeks applications for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level for fall 1998. Ph.D. is required and postdoctoral experience is preferable. A successful candidate must have an established research record, the potential for extramural funding supporting a research program that includes supervision of Master's-level students, and a commitment to excellence in teaching including general course and area of specialty. Preferences will be given to individuals with expertise in the interaction between reproductive systems and the environment. We encourage candidates with expertise in comparative endocrinology, neuroendocrinology, and behavioral endocrinology of vertebrates at either the cellular or organismal level to apply. Teaching responsibilities include upper-division and graduate courses in reproductive physiology and participation in upper-division human and animal physiology courses. San Francisco State University offers laboratory space, competitive start-up funds, and successful extramural research funding. Information on the Department of Biology and the University can be found on our website: www.sfsu.edu/~biology. Send letter of application, curriculum vitae, statement of teaching and research goals, and three letters of reference by December 1, 1997, to: **Faculty Search Committee, Reproductive Ecological Physiologist, Department of Biology, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132.** *Women, ethnic minorities, and persons with disability are especially urged to apply. San Francisco State University is an Equal Opportunity/Affirmative Action Employer.*

TWO ASSISTANT PROFESSOR POSITIONS GENETICS AND INVERTEBRATE PHYSIOLOGY

Eckerd College seeks Ph.D. applicants for two tenure-track Assistant Professor positions to begin fall, 1998. In addition to teaching in the major, both positions require development of a research program accessible to undergraduates and occasional participation in the College's interdisciplinary, values-oriented, general education program. Eckerd College has recently completed a new marine science building and, through grants from HHMI and the Keck and Kresge Foundations, has developed state-of-the-art teaching/research labs in biology and marine science. Applicants should send a letter describing qualifications, curriculum vitae, undergraduate and graduate transcripts, three confidential recommendations, and teaching evaluations (if available) by 15 November 1997 to faculty listed below at: **Eckerd College, 4200 54th Avenue South, St. Petersburg, FL 33711.**

MARINE INVERTEBRATE PHYSIOLOGIST

Teaching will include an introductory-level marine invertebrate zoology course, and a junior-level, comparative and/or environmental physiology course that utilizes cellular and subcellular approaches. Send applications to: **Dr. Peter A. Meylan.**

GENETICIST

Teaching will include undergraduate courses in genetics and cell biology utilizing modern molecular approaches in eukaryotes. Send applications to: **Dr. Guy Bradley.** *Equal Opportunity Employer; women and minorities are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR. The Department of Integrative Physiology of the University of North Texas Health Science Center at Fort Worth invites applications for a tenure-track position. A research emphasis in neural control of circulation or respiration with specific emphasis on the central nervous system is required. Evidence of teaching within a medical curriculum is preferred. Salary and start-up support are negotiable based upon experience.

The health science center is a state-supported institution with state-of-the-art facilities for medical student and graduate student education and is located in the cultural district of Fort Worth. Research facilities are supported by a AAALAC-approved barrier facility vivarium. Submit letter of application stating career goals, curriculum vitae, and three letters of recommendation to: **Robert T. Mallet, Ph.D., Search Committee Chair, Department of Integrative Physiology, University of North Texas Health Science Center, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2699.** Deadline for application: February 5, 1998, with a start date of September 1, 1998.

The health science center is an Equal Opportunity/Affirmative Action Institution.



BRIGHAM AND
WOMEN'S HOSPITAL

SCIENCE RESEARCH LABORATORY DIRECTOR

We are recruiting a Ph.D. to supervise a research program on cellular and molecular mechanisms of insulin resistance. Expertise in signal transduction and cell biology is required. The successful candidate will also be eligible for a Harvard Medical School faculty appointment at the rank of instructor or assistant professor.

Please forward your curriculum vitae and names of three references to: **Dr. Andrea Dunaif, Director, Women's Health, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115; Fax: (617) 264-5210. We are an equal opportunity employer committed to workforce diversity. EOE/AA.**

Association with **PERKINS** MultiCare System
Perkins MultiCare System includes Massachusetts General Hospital, Brigham and Women's Hospital, The North Shore Medical Center and the community-based Ambulatory and Hospital of Perkins Community HealthCare, Inc.

Kinetix Pharmaceuticals, Inc. is a well-funded, privately held, start-up biopharmaceutical company specializing in the discovery and development of low molecular weight pharmaceuticals that are inhibitors of members of the **protein kinase** family of signal transduction mediators. We are using an integrated approach to protein kinase targeted drug discovery that consists of combining protein structure-based drug design with the medicinal chemistry power of focused combinatorial and synthetic chemistry.

This process utilizes new target protein X-ray crystal structures, virtual compound library computer screening technologies, proprietary Kinase Template Modeling technology (KTM) and Computer Aided Molecular Modeling (CAMM) for the discovery, design and derivatization of modular chemistry pharmacophores.

The therapeutic areas we are concentrating on include: auto-immune diseases, inflammatory disorders, transplantation rejection, cancer and infectious diseases. If you are a highly motivated, enthusiastic team player who wants to be part of a new and exciting company dedicated to the field of protein kinase inhibitors, we have the following positions available.

Immunologist/Cell Biologist

Participate in the characterization of novel immunosuppressive and anti-inflammatory drugs. This includes setting up in-vitro assays to investigate T-cell, B-cell, monocyte and NK-cell functions, as well as characterizing the biological activities of selective protein kinase inhibitors. Requires a PhD, at least 2 years' post-doctoral training, and experience with tissue culture, T-cell cloning, proliferation and cytotoxic assays, immunofluorescence and ELISA assays. Experience in human immunology, transplantation, autoimmune and chronic inflammatory diseases is preferred. Expertise in the area of cytofluorimetry is desirable.

Job Code ICB/DS

Protein Chemist

We seek an experienced professional with a strong background in protein expression and purification to isolate proteins for use in enzymatic assays and crystallography. A PhD/MS and experience with Baculovirus-SF9 protein expression, large-scale protein purification and FPLC strongly desired.

Job Code PC/DS

In addition to an attractive compensation package, including competitive salary, comprehensive benefits and equity participation, we offer experienced leadership and a stimulating research environment that recognizes achievement. To apply, please send, fax or email your resume to:

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POSTDOCTORAL - ARTICULAR CARTILAGE LABORATORY

We have an outstanding postdoctoral position available in our Articular Cartilage Metabolism and Repair Laboratory for a results-driven individual to focus on gene expression monitoring of normal and diseased articular cartilage using the most advanced technology available. Applicants should have a Ph.D. in molecular biology or a closely related field. Experience in cell biology and connective tissue research are desirable but not required. The length of appointment for this position is approximately 2 years.

Genetics Institute is a biotechnology company with a strong tradition of excellence in basic and applied science, and provides exciting opportunities for motivated individuals. The post-doctoral program is a vibrant program offering the chance to make an impact in the field of articular cartilage research while gaining exposure to cutting edge technology. Please send letters of interest and CV to: Elisabeth Morris, DVM, Genetics Institute, Inc 87 CambridgePark Drive, Cambridge, MA 02140.

Genetics Institute offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k) pension plan and an on-site exercise facility. Genetics Institute is proud to be an equal opportunity employer dedicated to building strength through diversity.

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POSITIONS OPEN

MOLECULAR GENETICIST DEVELOPMENTAL BIOLOGIST DEPARTMENT OF BIOLOGY McGill University

The Department of Biology at McGill University invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. Preference will be given to candidates whose research addresses fundamental problems in cell and developmental biology using a genetically well characterized system. The successful applicant will join a large and dynamic department with research strengths in cellular, molecular, and developmental biology, ecology, evolution, and neurobiology, with extensive affiliations with the Faculty of Medicine and local research institutes. Applicants should hold the Ph.D. degree in biological sciences and have demonstrated research proficiency through postdoctoral training. Duties will involve the development of a vigorous research program and teaching at the undergraduate and graduate level. The expected start date is July 1, 1998. The deadline for applications is December 15, 1997, but applications will continue to be considered until the position is filled. Applications, including a curriculum vitae, a statement of research interests, and three letters of reference should be sent to: **Dr. Donald L. Kramer, Chair, Department of Biology, McGill University, 1205 Doctor Penfield Avenue, Montreal, Quebec H3A 1B1 Canada.** E-mail: don_kramer@maclean.mcgill.ca. In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents. McGill University is committed to Equity in Employment.

ASSISTANT OR ASSOCIATE PROFESSOR PROKARYOTIC BIOLOGY Northwestern University Medical School

Qualified candidates are sought for a full-time tenure-track faculty position (Assistant or Associate Professor) in the Department of Microbiology-Immunology in the area of prokaryotic biology. Areas of interest include but are not limited to: bacterial-host interactions, cell biology of bacterial infections, and the basic genetics or physiology of bacterial cells, Northwestern University Medical School features interactive laboratories that study bacterial, viral, and protozoan biology, and immune responses to infectious agents, in addition to other aspects of immunology and autoimmune responses. There is a strong collaborative environment at Northwestern University Medical School which bridges traditional departmental lines. There are also very strong Ph.D. and M.D.-Ph.D. programs that attract excellent students and postdoctoral fellows. Applicants should send a research description/plan, a complete curriculum vitae, and the name, address, telephone number, and e-mail of three references to: **Faculty Search, Department of Microbiology-Immunology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611-3008.** Applications will be reviewed upon receipt, and to ensure full consideration should be received by March 1, 1998. Salary is negotiable. *Northwestern University Medical School is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. Hiring is contingent upon eligibility to work in the United States.*

TROPICAL EVOLUTIONARY ECOLOGIST

The Department of Biology at Boston University invites applications for a tenure-track position at the rank of **ASSISTANT PROFESSOR** to begin in the fall of 1998. The successful candidate will be expected to have a strong background in neotropical organismal biology, and to use molecular approaches to address research questions in ecology and evolution. Teaching responsibilities include participation in an introductory course which focuses on ecology, behavior, and evolution, and an upper-level undergraduate or graduate course in area of specialty. Applicants should have a Ph.D. with postdoctoral experience, an active research program, and a commitment to excellence in teaching. The successful candidate will complement an active research program in ecology, behavior, and evolution. Applicants should send a curriculum vitae, statements of research and teaching interests, copies of three major reprints, and three letters of reference to: **Thomas H. Kunz, Chair, Evolutionary Ecology Search Committee, Department of Biology, Boston University, Boston, MA 02215.**

Closing date for applications is December 15, 1997.

Boston University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

UNIVERSITY OF COLORADO AT BOULDER MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY

We are recruiting a Cell Biologist for an **ASSISTANT PROFESSOR** tenure-track position that begins in summer or fall 1998. We are particularly interested in someone with a commitment to outstanding teaching and a vigorous research program in either cell cycle control or some other aspect of cell signaling. All materials must be postmarked by December 15, 1997. Complete applications (curriculum vitae, publications, an outline of future research, and three letters of evaluation solicited by the applicant) should be sent to: **Cell Biology Search, MCD Biology, University of Colorado, Boulder, CO 80309-0347.** *The University of Colorado at Boulder is committed to diversity and equality in education and employment.*

UCLA FACULTY POSITION UCLA-DOE LABORATORY OF STRUCTURAL BIOLOGY AND MOLECULAR MEDICINE

The Division of Structural Biology and Genetics of the UCLA-DOE Laboratory of Structural Biology and Molecular Medicine will appoint a faculty member at the level of **ASSISTANT PROFESSOR** or **ASSISTANT PROFESSOR IN RESIDENCE**, jointly with departments in the College of Letters and Science or the School of Medicine. We seek a Biochemist with an interest in genome or proteome analysis. Set-up and research funds will come from the UCLA-DOE Lab. Candidates must have significant research accomplishments, the ability to establish a vigorous research program, and a commitment to excellence in education. Applicants should provide a curriculum vitae, a summary of proposed research, copies of key publications or preprints, and three letters of recommendation by December 20, 1997. Applications should be sent to:

**Dr. David Eisenberg
Chair of Search Committee
UCLA-DOE Lab
UCLA, Box 951570
611 Circle Drive East
Los Angeles, CA 90095-1570
FAX: 310-206-3914**

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ORNITHOLOGIST

The Department of Biological Sciences, University of North Carolina at Wilmington, welcomes applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. A Ph.D. with postdoctoral experience in teaching and research is required. Primary responsibility is teaching undergraduate and graduate courses in ornithology, vertebrate natural history, and coastal ecology. The successful candidate is also expected to develop and maintain an externally funded, field-oriented research program involving coastal or marine birds. Send curriculum vitae, statement of teaching and research interests, graduate transcripts, and names of three references by 1 January 1998 to: **Dr. James Parnell, Ornithologist Search Chair, Department of Biological Sciences, University of North Carolina at Wilmington, NC 28403-3297.** *Equal Opportunity/Affirmative Action Employer. Women and minorities encouraged to apply.*

ASSISTANT PROFESSOR OF CHEMICAL ENGINEERING Massachusetts Institute of Technology

Applicants are sought for a junior-level, tenure-track faculty position in the Department of Chemical Engineering at the Massachusetts Institute of Technology. Applicants should have a Ph.D. in chemical engineering or a closely related field, should have demonstrated excellence in academic research, and should have a strong interest in teaching graduate and undergraduate chemical engineering students. Send résumé including the names of at least three references, graduate transcripts, and a description of research interests to: **Dr. Robert C. Armstrong, Head, Department of Chemical Engineering, Massachusetts Institute of Technology, 66-350, Cambridge, MA 02139.** Material should be received by January 1, 1997. *MIT is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF WEED SCIENCE available in Department of Crop Sciences, University of Illinois at Urbana-Champaign. Weed science position with emphasis on innovative extension education and complementary applied, problem-solving research. Nine-month tenure-track position; opportunity for summer appointment. Responsibilities 75 percent extension, 25 percent research. Ph.D. in weed science or closely related discipline required. Excellent interpersonal and communication skills, clear ability and desire to develop and deliver excellent individual and team extension education programs, and ability to conduct and report independent and collaborative research required. Salary commensurate with training and experience. Starting date May 21, 1998, or when available. For full consideration, applications accepted until January 5, 1998. Submit application packet consisting of introductory cover letter, curriculum vitae, and statement of extension and research goals. Arrange for receipt of full set of certified university transcripts, three letters of reference, and the packet by: **Professor G. H. Heichel, Head, Department of Crop Sciences, University of Illinois at Urbana-Champaign, 1102 South Goodwin Avenue, Urbana, IL 61801.** Telephone: 217-333-9480. For additional information and full job announcement contact: **Dr. Loyd M. Wax, Telephone: 217-333-4424; FAX: 217-333-5299; e-mail: l-wax@uiuc.edu.** *Affirmative Action/Equal Opportunity Employer.* Cite announcement number 10/97A-5810 when applying.

ASSISTANT PROFESSOR OF BIOLOGY (PLANT PHYSIOLOGIST)

Morehead State University invites applications for a tenure-track position as Assistant Professor of Biology (Plant Physiologist) beginning August 1998. Responsibilities: Teach courses, both lectures and labs, at the undergraduate (plant physiology, plant science, and principles of biology) and graduate (plant anatomy and specialty course) levels; co-manage a greenhouse; guide research of undergraduate and graduate students; be productive in professional achievement, research, and academic service. Qualifications: Ph.D. in biological science from an accredited institution with an emphasis in plant physiology. A.B.D.'s with imminent completion may be considered. Evidence of excellent written and oral communication skills and the potential for successful teaching, professional achievement (including research), and academic service. Desired qualification: Expertise in plant pathology. To ensure consideration, submit letter of application, curriculum vitae, statements of teaching philosophy and research interests, official transcripts, and three letters of reference by December 17, 1997, to: **Office of Human Resources, Attn: Plant Physiology #3192, Morehead State University, HM 101, Morehead, KY 40351.** *Morehead State University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR UNIVERSITY OF ALABAMA AT BIRMINGHAM

The Department of Biochemistry and Molecular Genetics at the University of Alabama at Birmingham is seeking applications for a tenure-track position from individuals that work with *Drosophila*. The specific area of research is open; individuals working on any aspect of signal transduction, biochemistry, cell or molecular biology are encouraged to apply. Applicants should forward a curriculum vitae, statement of research plans, and at least three letters of recommendation by January 2nd, 1998, to: **Dr. Jamila I. Horabin, Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL 35294.** *An Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF CALIFORNIA AT BERKELEY

ASSISTANT, ASSOCIATE, or FULL PROFESSOR of silviculture, nine months, tenure-track, starting July 1, 1998. Ph.D. with expertise in silviculture and forest ecology is required for appointment. Experience should include research in silviculture, forest dynamics, and restoration of forested landscapes and familiarity with current forest management issues. For further information, including a full position description, contact: **Chair, Silviculturist Search Committee, Department of Environmental Science, Policy, and Management, 145 Mulford Hall, University of California, Berkeley, CA 94720-3114.** Telephone: 510-642-7125. Applications close December 31, 1997. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

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- MANUFACTURING

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For more information on Bayer, search:
<http://www.caremosaic.com/cml/bayer/>

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Bayer Corp. is committed to enhancing and maintaining cultural diversity within our work environment.

THE NATIONAL RESEARCH COUNCIL *is accepting applications for* **Postdoctoral Research Associateship Awards** *at the* **US Environmental Protection Agency's Atlantic Ecology Division (AED) Narragansett, RI**

The National Research Council (NRC) will offer competitive Associateship awards for research in residence at the EPA/AED. Research opportunities are in the following areas:

- Development and application of physiologically-based population models, such as individual-based models and bioenergetics models for selected estuarine fish species. For information contact Dr. Timothy R. Gleason, tel: 401/782-3033 or email: gleason.timothy@epamail.epa.gov
- Development and application of molecular approaches to assess genetic diversity in key species of estuarine/marine ecosystems. Contact Dr. Diane Nacci, tel: 401/782-3143 or email: nacci.diane@epamail.epa.gov
- Development of a general method for simplifying complex coastal ecosystems and regional environmental systems. Contact Dr. Daniel E. Campbell, tel: 401/782-3195 or email: campbell.dan@epamail.epa.gov
- Development of research approaches to identify and narrow uncertainties concerning future ecological risks in selected US Atlantic coast watersheds and associated coastal receiving waters. Contact Dr. Henry A. Walker, tel: 401/782-3134 or email: walker.henry@epamail.epa.gov
- Development of non-traditional approaches to bridge human demographic analysis and ecological systems analysis and define joint dependencies on water quantity and quality within a specific watershed. Contact Dr. Gerald Pesch, tel: 401/782-3007 or email: pesch.gerald@epamail.epa.gov

Fax for contacts listed above: 401/782-3030
Mailing address: US EPA NHEERL AED,
27 Tarzwell Drive, Narragansett, RI 02882

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

For application materials contact:
NATIONAL RESEARCH COUNCIL
Associateship Programs (TJ2114/EN)
2101 Constitution Avenue NW
Washington, DC 20418
FAX: (202) 334-2759
EMAIL: rap@nas.edu

POSITIONS OPEN

MICROBIOLOGIST

The Biology Department of Seattle University seeks applicants for a full-time, tenure-track position at the **ASSISTANT PROFESSOR** level. With approval of final funding, the position will start in September, 1998. Qualifications include a Ph.D. in a biological science, with expertise in microbiology. Candidates should have an interest and ability in undergraduate teaching. Teaching responsibilities include general microbiology for majors and non-majors, general biology, and upper-division course in the individual's area of expertise, preferably immunology, medical microbiology, and/or parasitology. Seattle University is committed to excellent teaching by faculty who are engaged in active scholarship. The Biology Department particularly encourages faculty scholarly activities which include students.

Applicants should send a letter of application (including curriculum vitae and a statement of teaching philosophy and scholarly interests) and request that transcripts and three letters of reference be sent to: **Dr. David C. Brubaker, Department of Biology, Seattle University, Seattle, WA 98122-4340** by January 5, 1998. For inquiries or questions Telephone: 206-296-5485; e-mail: bru@seattleu.edu; FAX: 206-296-5634; website: <http://www.seattleu.edu/scieng/biology/biology.htm>.

Seattle University is an Equal Opportunity/Affirmative Action Employer.

EPILEPTOLOGIST UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER

This appointment is a tenure-track position at the level of **ASSISTANT PROFESSOR**. M.D. or M.D.-Ph.D. Board-certified Neurologist with fellowship training in clinical neurophysiology, including epilepsy monitoring and electrocorticography, is needed to head an epilepsy research laboratory. Ph.D. is highly desirable. Should be Board-eligible or Board-certified in clinical neurophysiology. The candidate must have experience with ultrastructural analysis of the hippocampus, immunocytochemistry, and other histological techniques. Experience and a proven track record of publications using several animal models of epilepsy are also required. Publications in the field of clinical epilepsy are highly desirable. Please send your résumé by November 9, 1997, to: **Dr. Donald Gilden, Department of Neurology, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Box B182, Denver, CO 80262**. The University of Colorado is committed to Equal Opportunity and Affirmative Action.

ECOLOGY, ASSISTANT PROFESSOR UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Ecology and Evolutionary Biology at the University of California, Irvine, solicits applications for a faculty position in ecology. Appointment will be made at the Assistant (tenure-track) Professor level. Information about the Department can be found on the World Wide Web at website: <http://www.bio.uci.edu/units/ee>. The successful candidate will be expected to participate in both the undergraduate and graduate teaching programs in the Department. The deadline for submission of applications is December 1, 1997. Please submit curriculum vitae, description of research and teaching interests, selected publications, and the names, addresses, e-mail addresses, and telephone numbers of at least three references to: **Ecology Search Committee, Department of Ecology and Evolutionary Biology, University of California, 321 Steinhaus Hall, Irvine, CA 92697-2525**.

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

YALE UNIVERSITY DEPARTMENT OF CHEMISTRY

The Department of Chemistry, Yale University, invites applications for a position at the **ASSISTANT PROFESSOR** level to commence fall 1998. We seek creative teacher-scholars who show promise for developing outstanding research programs in the broad fields of inorganic, theoretical, and biophysical chemistry. Applicants should send curriculum vitae and a statement of research plans and arrange for the submission of three letters of recommendation. All materials should be received by 1 December 1997. Send applications to: **Professor Donald M. Crothers, Chair, Junior Faculty Search Committee, P.O. Box 208107, Yale University, New Haven, CT 06520-8107**. Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR BIOLOGY AND BIOCHEMISTRY

A tenure-track Assistant Professor position is now available in a vital, young, and expanding program at a dynamic university in a beautiful, metropolitan setting. Special consideration will be given to candidates with expertise in protein biochemistry, including application of physical or chemical techniques and quantification of molecular interactions; however, applicants in other research areas will also be considered. Applicants must have several years of postdoctoral experience and strong written and oral communication skills. The person hired will be expected to develop a vigorous, extramurally funded research program and to participate in graduate and undergraduate teaching. Salary, space, start-up funds, and facilities are competitive and the program is well-equipped with modern instrumentation. Review of applications will begin on November 14 and continue until the position is filled. Applicants should forward a complete curriculum vitae and research prospectus, and arrange to have three letters of recommendation sent to: **Dr. Gerald M. Carlson, Head, Division of Molecular Biology and Biochemistry, Search Committee 1, School of Biological Sciences, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110-2499**. An Affirmative Action/Equal Opportunity Employer.

ENVIRONMENTAL CHEMIST

The University of South Carolina seeks applications from Environmental Chemists for a nine-month tenure-track position to begin August 1998. We anticipate filling this position at the rank of **ASSISTANT PROFESSOR**, but applications for a more **SENIOR** appointment will be considered. Preference will be given to candidates who work in analytical environmental chemistry with a strong organic chemistry background; however, any candidate who complements our existing strengths in environmental aspects of analytical, biological, or geological chemistry or toxicology will be considered. Ph.D. required; postdoctoral experience preferred. The successful candidate will be expected to establish a vigorous, well-funded research program. Teaching duties will emphasize environmental chemistry courses at undergraduate and graduate levels. Applicants should submit a curriculum vitae and a detailed description of research plans by November 10, 1997, and arrange for at least three letters of recommendation to be sent to: **Professor S. Michael Angel, Chairman of Environmental Chemist Search Committee, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC 29208**. Visit our website: <http://www.cosm.sc.edu/chem>. The University is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities and women.

VIROLOGIST ASSISTANT PROFESSOR

The University of Kansas is seeking outstanding candidates for a tenure-track Assistant Professor position in the Department of Microbiology beginning fall 1998 (contingent on final budgetary approval). Candidates with postdoctoral experience, whose research interests encompass eukaryotic virology, and who have demonstrated creativity and productivity, will be considered. The selected candidate will be expected to develop and sustain a vigorous research program and to participate effectively in the teaching of undergraduate and graduate students. Applicants please submit a curriculum vitae, a statement of research interests, a statement of teaching interests, and arrange for three letters of reference to be sent to: **Dr. Clarence S. Buller, Department of Microbiology, University of Kansas, Lawrence, KS 66045**. First consideration will be given to completed applications received by January 15, 1998, and review will continue until the position is filled. To learn more about the Department of Microbiology, visit our website: <http://www.cc.ukans.edu/~micro>. Equal Opportunity/Affirmative Action Employer. Applications from women and minorities are encouraged.

ASSISTANT RESEARCH PROFESSOR, non-tenure-track position, to work on enzyme kinetics, protein purification, and protein folding. Ph.D. in biochemistry, 10 years of experience, and strong publication record required. Must be U.S. citizen. Send résumé and two letters of reference to: **Dr. Elliott Bedows, University of Nebraska Medical Center, Eppley Institute, 600 South 42nd Street, Box 986805, Omaha, NE 68198-6805**. University of Nebraska Medical Center is an Affirmative Action/Equal Employment Opportunity Employer.

POSITIONS OPEN

COMMUNITY/ECOSYSTEM ECOLOGIST

The Department of Biology at Baylor University invites applications for a tenure-track **ASSISTANT PROFESSOR** position in community/ecosystem ecology beginning 1 July 1998. Applicants must have a Ph.D. and use modern techniques to study community or ecosystem processes or patterns. We especially encourage applications from individuals with expertise in simulation modeling. Position responsibilities: teach general biology for non-majors, and develop and teach an advanced course in area of specialty; establish a research program that can involve undergraduate and graduate students; participate in departmental and university service. By 2 January 1998, submit an application letter, curriculum vitae, statements of teaching philosophy and research interests, graduate and undergraduate transcripts, and have three letters of reference sent to: **Kevin Gutzwiller, Search Committee Chair, Department of Biology, Baylor University, Waco, TX 76798-7388**. Telephone: 254-710-2911; FAX: 254-710-2969; e-mail: kevin_gutzwiller@baylor.edu; website: www.baylor.edu. Baylor University is a Baptist university affiliated with the Baptist General Convention of Texas. As an Affirmative Action/Equal Opportunity Employer, Baylor encourages minorities, women, veterans, and persons with disability to apply.

ASSISTANT PROFESSOR, tenure-track position starting September 1998 in a multidisciplinary department. We seek a broadly trained **MOLECULAR GENETICIST** with a Ph.D. in molecular genetics or a closely related field. Postdoctoral experience and an outstanding research record are essential. The candidate is expected to establish a vigorous, extramurally funded research program in animal genetics, teach undergraduate courses in genetics, participate in the graduate program, and interact with other cellular/molecular faculty members in the department. Submit curriculum vitae, statement of research and teaching interests/experience, representative reprints, and three letters of recommendation to: **Dr. R. G. Van Buskirk, Department of Biological Sciences, Binghamton University, Binghamton, NY 13902-6000** by December 15, 1997. The State University of New York at Binghamton is one of the four doctoral-granting campuses in the State University of New York system and is dedicated to growth in research and graduate education. The University is cited each year by many groups as one of the best public universities in the nation. Additional information can be found through the University website: <http://www.binghamton.edu>. Strongly committed to Affirmative Action, recruitment is conducted without regard to race, color, sex, religion, age, disability, marital status, sexual orientation, or national origin.

CELL BIOLOGISTS

The Department of Zoology, University of Oklahoma, has two (2) tenure-track **ASSISTANT PROFESSOR** positions beginning in the fall of 1998 for Cell Biologists to support the Department's strengths in cell and developmental biology. For each position the primary teaching responsibility will be one course each semester, including undergraduate or graduate courses in cell biology and periodic rotation through zoology courses, dependent on expertise. Candidates must have Ph.D. with proven record of good teaching and research abilities (demonstrated by publications). Postdoctoral experience preferred. Screening begins 12 January 1998 and will continue until position is filled. Send curriculum vitae, four letters of recommendation, reprints, summary of teaching experience, and description of research interests to: **Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019**. An Equal Opportunity/Affirmative Action Employer. Oklahoma University has a policy of being responsive to needs of dual-career couples.

RESEARCH ASSISTANT PROFESSOR in the Department of Anesthesiology at the University of Illinois at Chicago. Non-tenure-track position for independent investigator with research interests in the area of cerebral ischemia. Candidates should be committed to excellence in research and training and have substantial outside funding. Interested persons should address correspondence to: **Ronald F. Albrecht, M.D., Head, Department of Anesthesiology, University of Illinois at Chicago, 1740 West Taylor, m/c 515, Chicago, IL 60612**. Attn: June Palmer, Ph.D. Please include curriculum vitae, names of three references, and a brief description of research program. Equal Opportunity/Affirmative Action Employer.

GEORGIA SOUTHERN UNIVERSITY
Department of Chemistry

Assistant Professor. Two tenure-track positions: one in Biochemistry and the other in Experimental Physical Chemistry, to begin August 1, 1998. Applicants must have command of written and spoken English, demonstrated teaching and research abilities, and a commitment to teaching at the undergraduate level. Successful candidates will teach the indicated specialty as well as lower-level general and organic chemistry and will be expected to develop an effective research program in collaboration with undergraduate students. Salaries dependent upon qualifications. **Biochemist**—teaching and research interests to complement existing strengths in protein chemistry and molecular biology preferred. Must have an earned Ph.D. in Chemistry or Biochemistry by the time of the appointment. **Physical Chemist**—must have an earned Ph.D. in Chemistry and formal training in experimental physical chemistry by the time of the appointment. For more information see departmental web page: <http://www2.gsu.edu/chemdept>. Applicants for either position should send a current curriculum vitae, unofficial copies of undergraduate and graduate transcripts, a statement of teaching philosophy, a description of proposed research, and arrange to have three letters of reference sent to: **Dr. Bill Ponder, Department of Chemistry, P.O. Box 8064, Georgia Southern University, Statesboro, GA 30460-8064**. Postmark deadline for completed applications is November 28, 1997. The names of applicants and nominees, résumés, and other general non-evaluative information are subject to public inspection under the Georgia Open Records Act.

GSU, a regional university in the University System of Georgia, is an EO/AA institution. Persons who need accommodations in the applications process under ADA should contact the department chair.

TRAINING

MBL Opportunities for
Under-represented Minorities
in Science

Substantial financial support is available to minority graduate students, post-docs, and junior faculty members participating in summer courses and research programs at the Marine Biological Laboratory, Woods Hole, MA. MBL Summer opportunities include:

- A wide and distinguished array of hands-on training courses;
- Basic biological science research experience in the laboratories of senior investigators.

Selection for participation in these programs is competitive; qualified minority scholars are encouraged to apply. Generous scholarship and fellowship assistance is provided to minority applicants who are selected for admission. A complete guide of programs is available to interested students and researchers.

Please contact: **Carol Hamel, Admissions Coordinator, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543; tel: 508-289-7401; <admissions@mbi.edu>**



MARINE
BIOLOGICAL
LABORATORY

MBL Guide to Research & Education can be found on the web: <http://www.mbl.edu>.

MBL is an EEO/Affirmative Action Institution.

NEURAL CELL BIOLOGIST

The Neuroimmunology Unit at the Montreal Neurological Institute wish to recruit a **Neural Cell Biologist**. The successful candidate will join a group whose current independent and collaborative research projects relate to neuronal and glial cell development, function, and degeneration, and to immune-neural interactions, both in a clinical setting and in experimental (transgenic and knockout) animal systems.

This will be an Assistant Professor level position at McGill University. The candidate is expected to establish an independent, externally funded research laboratory, integrated within the Unit and in the Montreal Neurological Institute. The Institute offers opportunities for collaboration with molecular, cellular, and systems neuroscientists.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. McGill University is committed to equity in employment. Non-Canadians are encouraged to apply.

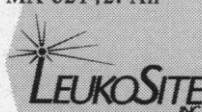
Applications should include a curriculum vitae and the names of three references, and should be sent to: **Coordinator, Neuroimmunology Search Committee, Montreal Neurological Institute, 3801 University St., Montreal, Quebec, Canada H3A 2B4**. Deadline for receipt of applications is March 1, 1998.

LeukoSite, Inc., located in the Kendall Square area of Cambridge, MA, is a leader in inflammation research and the development of novel therapeutics for the selective immunosuppression of chronic inflammatory diseases. We have collaborations with major pharmaceutical companies, as well as leading academic labs in the US and Europe.

BIOINFORMATICS/
COMPUTATIONAL BIOLOGY

Candidates for this position must possess an advanced degree in a relevant biological discipline. Technical expertise in the development and application of computational sequence analysis methods are preferred. Expertise in DNA and protein database retrieval and mining, knowledge of algorithms for sequence comparison and function prediction, as well as UNIX programming and database development skills are required. Experience with AWK/PERL is also preferred.

Please send your CV with cover letter to: Employee Services, LeukoSite, Inc., 215 First Street, Cambridge, MA 02142. An Equal Opportunity Employer. See our website at: www.leukosite.com.



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

For application materials and information on participating laboratories contact:

ASSOCIATESHIP PROGRAMS
(TJ-2114/S4)

NATIONAL RESEARCH COUNCIL

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



INTERNET:

<http://www.nas.edu/rap/welcome.html>

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

POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITION UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** position in the Biochemistry Department of the University of Washington Medical School. We are particularly interested in applications from creative individuals with strong records of research and plans to develop research programs focused on important biological problems involving macromolecular interactions. Applicants should have a Ph.D. in biochemistry or molecular biology and will be expected to participate in interdisciplinary graduate training programs. The appointee is expected to share teaching of undergraduate biochemistry. Send curriculum vitae, a synopsis of research plans, and three letters of recommendation by December 1, 1997, to:

Search Committee
Kenneth Walsh, Chair
Department of Biochemistry
University of Washington
Box 357350
Seattle, WA 98195-7350
FAX: 206-685-9231

The University of Washington is guiding a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University is an Affirmative Action/Equal Opportunity Employer.

HARVARD MEDICAL SCHOOL DEPARTMENT OF PATHOLOGY

The Department of Pathology at Harvard Medical School seeks well-qualified (Ph.D., M.D.-Ph.D., or M.D.) applicants for a tenure-track position at the **ASSISTANT or ASSOCIATE PROFESSOR** level with research interests in the area of immunology.

As part of the expansion of its basic research program in immunology, the Pathology Department is recruiting an outstanding candidate who has completed three to five years of relevant postdoctoral or independent research, and who has the capability of directing a rigorous independent research program in an area relevant to immunology.

Candidates are expected to participate in the teaching activities of the Department for medical students, graduate students, and postdoctoral fellows. Recently renovated laboratory research space and an attractive start-up support package are available for this position. Applicants should send their curriculum vitae, a statement of research interests, and the name, address, and telephone number of four references to: **Dr. Peter M. Howley, Department of Pathology, Harvard Medical School, 200 Longwood Avenue, D2-629, Boston, MA 02115.** *Harvard Medical School is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

MARINE BIOLOGISTS. The Department of Biology at The University of West Florida invites applications for two tenure-track faculty positions at the level of **ASSISTANT PROFESSOR**, available August 1998. We seek candidates with specialties in: (1) marine vertebrate zoology; (2) marine invertebrate zoology. Expertise in physiology is preferred for both positions, but excellent candidates with proficiencies in other areas that complement our existing faculty in marine biology will be considered. The successful candidates are expected to teach at the lower division (e.g., anatomy and physiology, general zoology), offer additional courses in the specialty at both the undergraduate and graduate levels, and develop an active research program involving undergraduate and Master's students. Qualifications include Ph.D. and postdoctoral research experience. Teaching experience is desirable. Applicants should submit a statement of teaching and research interests, curriculum vitae, transcripts, and three letters of reference by December 31, 1997, to: **Dr. John P. Riehm, Chair, Department of Biology, The University of West Florida, Pensacola, FL 32514.** E-mail: jriehm@uwf.edu. Additional information about the university and department can be found at our website: <http://www.uwf.edu>. *The University of West Florida is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

Central College. Tenure-track, plant ecology, August 1998. **ASSISTANT PROFESSOR/INSTRUCTOR.** Ph.D. preferred, A.B.D. considered. Courses: ecology, botany, evolution, biostatistics, introduction to environmental science. Position description/application procedures: **Dr. Virginia Coombs, Dean, Central College, Pella, IA 50219.** E-mail: facsearch@central.edu.

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR DEPARTMENT OF BIOLOGY

Rensselaer Polytechnic Institute invites applications for a tenure-track faculty position, to start September 1998. Applicants are sought who utilize biochemical, genetic, computational, and molecular modeling approaches to study health-related environmental problems in fields such as toxicology, xenobiotics, public health, or water-borne diseases, to complement departmental research initiatives in environmental biology. Applicants must be able to teach undergraduate and graduate courses relevant to degree programs in biochemistry, molecular biology, and bioinformatics. Requirements include two years of postdoctoral research experience or equivalent. Development of an independent research program is expected. Review of applications will begin December 15, 1997. Later applications may be considered. Send curriculum vitae, statement of research plans and teaching interests, publication list, and names of three references to: **Professor Joyce Diwan, Search Committee Chair, Biology Department, Science Center, Rensselaer Polytechnic Institute, Troy, NY 12180-3590.** *Rensselaer is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

DEVELOPMENTAL BIOLOGY UNIVERSITY OF CALIFORNIA, RIVERSIDE

The Department of Biology seeks one (or two, pending funding) Developmental Biologists at the junior (tenure-track **ASSISTANT PROFESSOR**) or senior (tenured **ASSOCIATE or FULL PROFESSOR**) level. The successful candidate's research will focus on fundamental mechanisms of development using cellular, molecular, and genetic approaches. He/She will establish a vigorous research program, contribute to undergraduate and graduate curricula, and participate in our interdepartmental graduate research unit in cell, molecular, developmental biology. Applicants must have a Ph.D. degree and two or more years of postdoctoral training; senior applicants must have an excellent research and teaching record. A curriculum vitae, statement of research interests, copies of relevant publications, and three to five letters (or names and addresses of references) should be sent to: **Chair, Search Committee, Department of Biology, University of California, Riverside, CA 92521** by January 5, 1998. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH SCIENTIST UNIVERSITY OF IOWA DEPARTMENT OF PEDIATRICS

Oversee large lab conducting large-scale arraying, sequencing, and mapping of rat cDNAs. Implement effective quality control/tracking systems. Conduct developmental research. Requires: Ph.D. in biological science, genetics, or molecular biology or equivalent; experience in DNA sequencing, PCR, and molecular biology; research work that included publication record in peer-reviewed journals or co-investigator status on externally funded research project. Desirable: Supervisory experience; experience with automated DNA sequencing, radiation hybrid mapping, and computer knowledge of programs used for linkage analysis, database searches, and DNA sequence analysis. Résumés to: **Janine McBride-Rahn, University of Iowa, Department of Pediatrics, Attn: #97, 200 Hawkins Drive—2633 JCP, Iowa City, IA 52242-1083.** *The University of Iowa is an Equal Employment Opportunity/Affirmative Action Employer and strongly encourages women and minorities to apply.*

GENETICIST

The Department of Biological Sciences, Goucher College, has an opening at the **ASSISTANT PROFESSOR** level for a broadly trained Geneticist beginning September 1998. Candidates must possess a Ph.D. and a commitment to teaching and research at an undergraduate institution. Postdoctoral and teaching experience are preferred. Responsibilities include teaching intermediate and advanced courses in genetics, participation in the core curriculum at the Freshman and Sophomore level, and developing a research program which includes undergraduates. Applicants should send curriculum vitae, summary of teaching philosophy and research interests, and three letters of recommendation to: **Dr. George Delahunty, Chair Genetics Search, Department of Biological Sciences, Goucher College, 1021 Dulany Valley Road, Baltimore, MD 21204.** Application deadline is December 1, 1997. *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY (HUMAN PHYSIOLOGIST)

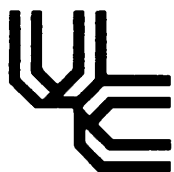
Morehead State University invites applications for a tenure-track position as Assistant Professor of Biology (Human Physiologist) beginning August 1998. Responsibilities: Teach undergraduate and graduate lectures/labs in human physiology, human anatomy, and general biology; participate in the Physician's Assistant Program; guide research of undergraduate and graduate students; be productive in professional achievement (including research) and academic service. Qualifications: Ph.D. in biological science from an accredited institution with an emphasis in medical human physiology. A.B.D.'s with imminent completion may be considered. Background in the molecular and cellular aspects of human physiology. Evidence of good communication skills, scientific writing ability, and the potential for successful teaching, professional achievement (including research), and academic service. To ensure consideration, submit letter of application, curriculum vitae, statements of teaching philosophy and research interests, official transcripts, and three letters of reference by December 17, 1997, to: **Office of Human Resources, Attn: Human Physiology #2867, Morehead State University, HM 101, Morehead, KY 40351.** *Morehead State University is an Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST REED COLLEGE

The Reed College Biology Department invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level to commence in the fall of 1998. A Ph.D. is required and postdoctoral experience is highly desirable. Teaching duties include an upper-division lecture/laboratory course in microbiology, participation in a team-taught introductory level course, an advanced seminar course in his/her specialty, and directing year-long senior thesis research. He/she should be broadly trained in microbial physiology and will be expected to establish an active and competitive research program for which start-up funding is available. We seek a person with demonstrated excellence in research and teaching, and a commitment to mentoring undergraduates. Reed College is a selective liberal arts institution with a distinguished record of educational accomplishment and a strong commitment to scholarship (website: <http://www.reed.edu/>). Applications including curriculum vitae, statement of research interests, pertinent reprints, and three recent letters of reference should be sent by January 6, 1998, to: **Search Committee Chair, Biology Department, Reed College, Portland, OR 97202-8199.** *Reed College is an Equal Opportunity Employer.*

The Chemistry Department of Wesleyan University invites applications for a tenured faculty position in experimental organic chemistry with a synthetic component at the **ASSOCIATE PROFESSOR or PROFESSOR** level, effective September 1998. The successful candidate will exhibit a record of effective and enthusiastic teaching at the undergraduate and graduate levels, and demonstrated excellence in a vigorous and well-funded research program. The Chemistry Department is well-equipped and has an active Ph.D. program involving 12 full-time faculty and circa 35 graduate students and Postdoctoral Associates. Salary, fringe benefits, and start-up funds will be competitive. Interested applicants should submit a curriculum vitae, a summary of past research accomplishments and future plans, a summary of current funding, a description of teaching interests and accomplishments, and the names of three references to: **The Chair of the Organic Search Committee, Department of Chemistry, Wesleyan University, Middletown, CT 06459-0180.** Review of applications will begin on December 31st and continue until the position is filled. *Wesleyan University is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority candidates.*

RESEARCH ASSOCIATE (two positions) in the Department of Anesthesiology at the University of Illinois at Chicago. Non-tenure-track positions for Investigators with research experience in the area of cerebral ischemia. Candidates should have an advanced degree (M.D. or Ph.D.) and have extensive experience in research methodologies. Interested persons should address correspondence to: **June W. Palmer, Ph.D., Assistant to the Head, Department of Anesthesiology, University of Illinois at Chicago, 1740 West Taylor, m/c 515, Chicago, IL 60612.** Please include curriculum vitae, names of three references, and a brief description of research program. *Equal Opportunity/Affirmative Action Employer.*



University of Cincinnati

Faculty Positions Cell Biology

The Department of Cell Biology, Neurobiology and Anatomy at the University of Cincinnati Medical Center is inviting applications for two tenure-track positions in cancer cell biology. We are primarily seeking individuals at the level of Assistant Professor, but outstanding candidates at any level will be considered. Preference will be given to applicants who use cellular, molecular, or developmental approaches to study normal or dysfunctional cell regulation, growth, or motility as they relate to cancer. One of the appointees will have expertise in state-of-the-art microscopic techniques. Applicants should have postdoctoral experience.

Successful candidates are expected to develop and maintain an independent extramurally funded research program and to contribute to graduate and medical teaching. Generous start-up support is available. Applicants should send a current curriculum vitae, statement of professional accomplishments and objectives, a description of research interests, and names of three references to:

William J. Larsen, Ph.D.

**Cancer Cell Biology Search Committee
University of Cincinnati College of Medicine
P.O. Box 670521
Cincinnati, OH 45267**

*The University of Cincinnati is an Affirmative Action
Equal Opportunity Institution*

Harvard Medical School Massachusetts General Hospital Department Of Anesthesia And Critical Care

Applications are invited for a postdoctoral or junior faculty position to study insulin resistance in critical illness. The objective of the research is to study derangements in signal transduction at and beyond insulin and other growth factor receptors. The long-term goal is to attenuate this insulin dysfunction and correct protein catabolism and muscle wasting of critical illness.

The post is funded by the NIH, with formal appointments at the above enumerated institutions. The successful candidate will have an interdisciplinary approach and support that would include the Departments of Anesthesia, Medicine (Endocrine), and Surgery.

Strong research record in biochemical and molecular biological techniques is essential. Previous experience in the area of lipid and/or protein signaling is preferable/appropriate. Experiments would include small animals and cell lines.

Closing date for application is November 30, 1997. Written applications, including c.v., with names and addresses of two referees, should be sent prior to November 30, 1997, to:

**J. A. Jeevendra Martyn, M.D.
Department of Anesthesia and Critical Care
Massachusetts General Hospital
32 Fruit Street
Boston, MA 02114**

New York University FACULTY POSITIONS Department of Biology

The NYU Department of Biology is continuing a long-term program of expansion and development. Two tenure-track assistant professorships are currently available (subject to final budgetary and administrative approval). One is in the area of cellular and molecular physiology (with an emphasis on receptors, intracellular signalling, membrane function); the second is in the broad area of molecular biology (with an emphasis on prokaryotic or plant systems). Candidates will be expected to develop active, externally-funded research programs and to participate in the department's teaching activities at both the undergraduate and graduate levels. The department offers an excellent research environment with a strong molecular focus, substantial start-up packages and modern laboratory facilities.

Application letter with curriculum vitae and three letters of reference should be sent to: **Chairman of the Search Committee, Department of Biology, New York University, 1009 Main Building, 100 Washington Square East, New York, New York 10003.**

NYU encourages applications from women and members of minority groups.

CHATHAM COLLEGE Chair of the Division of Science & Mathematics

Chatham College invites applications for the position of Chair of the Division of Science and Mathematics. The Division is one of four within the College and is composed of three departments: biology, chemistry and physics, and mathematics and computing. The successful applicant will have 1) an earned Ph.D. in organic chemistry/biochemistry or physical chemistry, or a related field; 2) academic credentials sufficient to qualify for a position at the associate or full professor level; 3) a demonstrated commitment to excellence in teaching and scholarship; and 4) demonstrated administrative and leadership skills. Preference will be given to those whose research and teaching interests focus on an area of environmental chemistry. The Chair will be expected to lead the division in the development of collaborative initiatives with the College's Rachel Carson (Class of '29) Institute. The Chair reports directly to the Vice President of Academic Affairs. Tenure is negotiable.

Chatham College is home to over 800 undergraduate and graduate students on 32 park-like acres in the Shadyside area of Pittsburgh. Chatham remains a private, selective, fully accredited, nonsectarian institution, offering baccalaureate degrees only to women. Master's degrees are offered to women and men.

Please send a letter of application, curriculum vitae, and the names, addresses, phone numbers, and e-mail addresses of at least three references to:

**Chatham College Human Resource Dept.
Job # 223, Woodland Road
Pittsburgh, PA 15232**

Screening of applicants will begin
December 5, 1997.

Chatham is an Equal Opportunity Employer.

RESEARCH ASSOCIATE

A position is open immediately for a highly qualified individual to conduct and supervise research on the molecule mechanisms of ventricular tachycardia. The principal focus of the research is to investigate the role of mutations in signal transduction proteins on electrophysiologic properties of myocardial cells. Approaches include the detection and analysis of mutations in biopsy samples, the analysis of the effects of mutations in signal transduction proteins on electrophysiologic properties of myocardial cells, and the development of an animal model of ventricular tachycardia through gene transfer. The appointee will be expected to carry out studies in one of these areas, while supervising and coordinating the laboratory. Applicants should have a background in molecular biology, and either animal or cellular electrophysiology. Send curriculum vitae and reference list to **Bruce B. Lerman, M.D., Chief, Division of Cardiology, The New York Hospital - Cornell Medical Center, 525 East 68th Street, New York, NY 10021. FAX: (212) 746-6951; e-mail: blerman@mail.med.cornell.edu.**

*Cornell University Is An Equal
Opportunity/Affirmative Action
Employer*

POSITIONS OPEN

The Department of Pharmacology at the University of South Florida College of Medicine is seeking to fill a tenure-track position at the level of **ASSISTANT/ASSOCIATE PROFESSOR**, depending on experience. We are seeking an individual with a strong research emphasis on signal transduction mechanisms to establish an independent program as well as interface with ongoing programs in neuropharmacology and cardiovascular pharmacology. Applicants will be expected to participate in teaching medical and graduate students. Required qualifications for the Assistant Professor level include a Ph.D., a minimum of two years of experience, and/or relevant postdoctoral experience. Required qualifications at the Associate Professor level are the required educational degree plus five years of experience at the Assistant Professor level. Please forward a letter, curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Lynn Wecker, Department of Pharmacology and Therapeutics, 12901 Bruce B. Downs Boulevard, MDC Box 9, Tampa, FL 33612-4799**. Materials must be received no later than December 31, 1997.

USF is an Equal Opportunity/Affirmative Action/Equal Access Institution. For disability accommodations, please contact: **Wanda Hinton at Telephone: 813-974-3823**, a minimum of five working days in advance.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO VETERAN'S ADMINISTRATION MEDICAL CENTER Department of Dermatology

Applications are now being accepted for an **ASSISTANT SPECIALIST**.

Qualifications: Ph.D. in physiology, biophysics, or pharmaceutical chemistry.

Responsibilities: Will participate on a study of the molecular biology of ion channels in keratinocytes. Must be experienced in cloning and in channel transfection into HEK293 cells and proficient in cell culture of keratinocytes.

Salary: Negotiable.

Contact: Applications to: **Richard B. Odom, M.D., Interim Chairman, Department of Dermatology, University of California, San Francisco, CA 94143-1214** by December 12, 1997. *University of California, San Francisco is an Affirmative Action/Equal Opportunity Employer. The University undertakes Affirmative Action to assure Equal Employment Opportunity for underutilized minorities and women, for persons with disability, and for Vietnam-era veterans and special disabled veterans.*

PLANT TAXONOMIST/ECOLOGIST

The Department of Biology at Texas A&M University-Kingsville invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level to begin August 1998. Successful candidates must possess a Ph.D. in biology or related field, and have a strong commitment to teaching and research. Teaching responsibilities will include courses in flowering plant taxonomy, introductory ecology, and participation in the freshman program. Postdoctoral training is preferred. Please send curriculum vitae, copies of transcripts, description of teaching and research interests, and three letters of recommendation to: **Dr. Steven A. Smith, Search Committee Chair, Department of Biology, Texas A&M University-Kingsville, TX 78363**. Telephone: 512-593-3504; e-mail: sa-smith@tamuk.edu. Applications will be accepted until December 1, 1997. *Texas A&M University is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR PHYSIOLOGIST

The Department of Cell Biology at Duke University Medical Center is planning an expansion of its faculty in the field of physiology. Interactive scientists with a strong research commitment and interest in an integrative approach to physiology using cellular and molecular approaches are encouraged to apply. Preference will be given to vertebrate model systems. Appointments will likely be at the level of **ASSISTANT PROFESSOR**. Please send a curriculum vitae, a brief description of research interests, and arrange for us to receive letters from at least three references by December 1, 1997. Address initial correspondence to: **Molecular Physiology Search, Michael P. Sheetz, Chairman, Department of Cell Biology, Duke University Medical Center, Box 3709, Durham, NC 27710**. *Duke University is an Equal Opportunity/Affirmative Action Employer. Minority applicants are encouraged to apply.*

POSITIONS OPEN

ACADEMIC HEMATOPATHOLOGIST

The Department of Pathology, Northwestern University Medical School, is searching for an Academic Hematopathologist, to join the Division of Hematopathology. A record of demonstrated scholarly productivity and strong skills in lymphomas and molecular diagnostics are desirable. The Division, under the leadership of **LoAnn Peterson, M.D.**, Professor of Pathology, actively participates in the residency and fellowship training. Applicants should be Board-certified or Board-eligible in AP/CP, and those with fellowship training in hematopathology will be preferred. Candidates may be considered for either a **CLINICAL** or **TENURE-TRACK** position. Consideration for a tenure-track appointment will be contingent upon strong evidence of academic accomplishments including independent funding. Send curriculum vitae, a letter outlining your interests and strengths, and names of five professional references no later than December 1, 1997, to: **Janardan K. Reddy, M.D., Professor and Chairman, Department of Pathology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611**. Telephone: 312-503-8144; FAX: 312-503-8249.

Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States. Members of minority groups and women are encouraged to apply.

QUANTITATIVE GENETICIST

The Oceanic Institute, a National Center for Applied Aquaculture Research in Waimanalo, Hawaii, seeks applicants for a full-time position in quantitative genetics. Position requires an M.S. or Ph.D. with a strong background in quantitative or molecular genetics. Additional desired qualifications: experience in management of a selective breeding program, knowledge of marine fish and/or marine shrimp genetics, publication experience, and an ability or potential in research. The successful candidate will be responsible for the selective breeding programs of aquacultured animals at the Waimanalo facility, as well as at other facilities on an as-needed basis. Development of a comprehensive breeding program and maintenance of a computerized pedigree of all animals is required. Application deadline is 19 December 1997, or until a suitable applicant is identified. Salary range is \$30,000 to \$40,000, depending on qualifications. Please submit letter of application, curriculum vitae, and names, addresses, and telephone numbers of at least three professional references to: **Human Resources Department, The Oceanic Institute, 41-202 Kalaniana'ole Highway, Waimanalo, HI 96795**. *The Oceanic Institute is an Equal Opportunity Employer.*

RESEARCH ASSOCIATE FRED HUTCHINSON CANCER RESEARCH CENTER

Research Associate position available in the Clinical Research Division to study gene transfer strategies targeting the hematopoietic system. Candidates should have a Ph.D. or M.D. with a minimum of two to three years of postdoctoral experience and a strong background in molecular and cellular biology.

Send curriculum vitae and references to:

**Fred Hutchinson Cancer Research Center
Recruit #SD-7775
1100 Fairview Avenue North, Mailstop: LV-201
P.O. Box 19024
Seattle, WA 98109-1024
FAX: 206-667-4051
E-mail: sdobbs@fhcrc.org**

Fred Hutchinson Cancer Research Center is an Equal Opportunity Employer committed to work force diversity.

RESEARCH ASSOCIATE position available in the Department of Microbiology, Colorado State University. B.S. degree (or equivalent) and at least two years of experience assaying mycobacterial cell wall biosynthetic enzymes required. The successful applicant must be able to assay UDP-galactopyranose mutase and TDP-rhamnose formation enzymes for inhibition by supplied compounds; biochemically synthesize and purify UDP-Galf and TDP-Rha; and assay, by GC/MS, for TDP-4-keto-6-deoxy glucose and TDP-4-keto-rhamnose. Salary will be \$21,000 per year. Send application and curriculum vitae to: **Michael McNeil, Department of Microbiology, Colorado State University, Fort Collins, CO 80523** by December 12, 1997. *Colorado State University is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office: 101 Student Services.*

POSITIONS OPEN

SCIENTIST VISTAKON JOHNSON & JOHNSON VISION PRODUCTS, INC.

Manufacturers of ACUVUE®, SUREVUE®, and 1-DAY ACUVUE®, Vistakon, a division of Johnson & Johnson, is a worldwide leader in the research and development, production, and distribution of disposable contact lenses. Headquartered in Jacksonville, Florida, Vistakon has an immediate opening for a Scientist.

Responsibilities include evaluating the impact of test materials on *in vitro* cell culture and conducting well-designed experiments to determine the effects on cell viability, cell physiology, inflammatory markers, chemokines, cell receptors, utilizing biochemical techniques (e.g., ELISA, PCR, and Western blot). Qualified candidates must possess an M.S. in cell biology/toxicology/biochemistry along with recent cell/tissue culture experience.

We offer a competitive salary, the comprehensive Johnson & Johnson benefits package, and the potential for professional growth within a dynamic organization. Please forward résumés to: **Vistakon Employment, P.O. Box 10157, Jacksonville, FL 32247**. Other opportunities are listed on our Employment Opportunity Line at **Telephone: 904-443-3839**. *Vistakon has a corporate commitment to the principle of diversity. In that spirit, we welcome applications from all individuals.*

LECTURER TUFTS UNIVERSITY

The Biology Department at Tufts University is seeking a full-time Lecturer beginning in the 1998-99 academic year. The position is non-tenure-track and is renewable on a yearly basis. This individual will coordinate and teach a part of the large, year-long, team-taught introductory course for biology majors. Additional responsibilities will include teaching a small introductory research techniques course, an intermediate lecture course that includes molecular and cellular principles, and coordinating the programs for undergraduate research in the Biology Department. The successful applicant will have a Ph.D. in an area of cell biology and have recent teaching experience. Send curriculum vitae, a statement of teaching philosophy, and two letters from references who can comment on the applicant's qualification for this position and teaching ability to: **Chair of Cell Biology Search Committee, Department of Biology, Tufts University, Medford, MA 02155**. Review of applications will begin December 15, 1997, and will continue until the position is filled. *Tufts University is an Affirmative Action/Equal Opportunity Employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply and to identify their status in their cover letter.*

ORGANIC CHEMISTRY AND MOLECULAR BIOLOGY POSITIONS

Mirus Corporation, a leader in non-viral gene therapy technology, is seeking highly motivated individuals to become a part of its scientific team. **MOLECULAR BIOLOGIST/CELL BIOLOGIST**. Primary responsibilities will include both applied research and product development for new and existing products. The ideal candidate will have a Ph.D. and be highly proficient in all areas of molecular biology, have good communication skills, and be able to work closely with others in a small but focused research setting. Experience in tissue culture, gene delivery, *in situ* hybridization, and a strong working understanding of cell biology, gene expression, and antisense systems is desirable. **ORGANIC CHEMIST**. Synthetic organic chemist wanted for applied biomedical research. Primary responsibilities will include the synthesis of a variety of water-soluble molecules for DNA delivery applications. A Ph.D. and experience in polymer chemistry is desirable. Applicants should send curriculum vitae along with names and addresses of three references to: **Jim Hagstrom, Mirus Corporation, 545 Science Drive, Madison, WI 53711**. Telephone: 608-238-4400; FAX: 608-233-3007; e-mail: jimh@genctransfer.com.

The Jules Stein Eye Institute and Department of Ophthalmology of the UCLA School of Medicine are seeking nominations and applications from distinguished Vision Scientists for the **FELDMAN ENDOWED CHAIR IN OPHTHALMOLOGY**. Please send a letter of nomination, or an application together with a current curriculum vitae and names of three references, to: **Wayne L. Hubbell, Jules Stein Eye Institute, UCLA School of Medicine, UCLA, Los Angeles, CA 90095-1761**. *UCLA is an Equal Opportunity Employer.*

BURROUGHS WELLCOME FUND

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in partnership with the
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Application deadline:
March 2, 1998

BWF is an independent
private foundation
established to advance
the medical sciences
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Durham, NC 27703
Tel: (919) 991-5100 Fax: (919) 941-5884
E-mail: mailback@bwfund.org

VISITING PROFESSORSHIPS IN THE BASIC MEDICAL SCIENCES AND IN THE MICROBIOLOGICAL SCIENCES

Professorships provide \$5,000 to four-year, degree-granting institutions to enable them to bring in distinguished scientists whose interests relate to the basic medical sciences and the microbiological sciences. Wellcome Visiting Professors will spend up to five days at the host institution, where they will engage in teaching and discussion with students and faculty and deliver a Wellcome Lecture on a subject pertinent to their discipline.

In the basic medical sciences, up to 33 awards will be made, including up to five awards to Canadian institutions. U.S. institutions may bring in scientists in anatomy, biochemistry and molecular biology, biophysics, bone and mineral research, cell biology, immunology, nutrition, pathology, pharmacology, physiology, and protein science. Canadian institutions also may bring in scientists in these disciplines, as well as in genetics, neurobiology, plant physiology, and toxicology.

In the microbiological sciences, at least five awards will be made, including at least one award to a Canadian institution. Institutions may bring in scientists in bacteriology, biotechnology, immunology, microbiology, molecular biology, mycology, parasitology, and virology.

Although available to all qualifying institutions, the professorships often prove especially valuable for smaller and newer institutions, for those with predominantly minority enrollments, and for those located in less urban areas.

Program information is available on BWF's website at <http://www.bwfund.org>

BIOMEDICAL
FUNDING OPPORTUNITIES

Omega Pharmaceutical, Inc. is a Birmingham, Alabama-based development late-stage pharmaceutical company engaged in the development and marketing of innovative bioactive natural products for the treatment and/or prevention of major human diseases. Our unique technology has given us a proprietary edge in taking on the multifaceted challenges associated with a diverse range of human infectious diseases, including sexually transmitted diseases (STDs) and HIV/AIDS. Join us at our new R&D facilities in Nevada as we aggressively pursue new product development programs as a member of our R&D team.

REGULATORY/CLINICAL AFFAIRS Carson/Tahoe, Nevada

The motivated senior-level specialist we seek will provide leadership in managing the regulatory direction of the company and assume responsibility for defining and executing regulatory strategies, compliance in and out of the laboratories, monitoring clinical trials in the U.S. and in third world countries, and directing all regulatory activities that will result in our products receiving FDA approvals.

The ideal candidate will have an advanced degree and a minimum of eight years of experience in the pharmaceutical industry, working in regulatory/clinical affairs, including direct experience with FDA interactions for INDs and NDAs, and support of marketed products.

Omega offers a very stimulating corporate and research environment in which team synergy and scientific curiosity are encouraged. We offer a competitive salary, benefits package, and stock options. For confidential consideration, please send a letter of introduction with salary requirements and curriculum vitae to: **Dr. Howard C. Krivan, 3588 Harvard Drive, Carson City, NV 89703.** Principals only.



Equal Opportunity Employer

Opportunity to Shape Nation's Health Information System

National Center for Health Statistics Seeks Directors for National Health Surveys

The National Center for Health Statistics, Centers for Disease Control and Prevention is the Nation's principal health statistics agency. NCHS provides statistical information to guide actions and policies to improve the health of the American people. NCHS is recruiting Division Directors for its health interview, examination and health care surveys.

Division Directors are responsible for:

- Designing and implementing surveys to meet current and future health data needs
- Providing science and policy leadership
- Managing a multi-disciplinary expert staff
- Conducting epidemiologic and statistical research
- Establishing partnerships with public and private organizations
- Maintaining close ties with diverse user communities
- Applying advanced technology to data collection, analysis and dissemination

Potential candidates should have a substantial record of accomplishment in statistics, survey research, health services research, epidemiology or a related discipline and the ability to manage professional and support staff. A doctoral degree (Ph.D., M.D., or other) or equivalent professional experience is required. Depending on qualifications, the applicant may qualify for the Senior Biomedical Research Service. Salary ranges from \$75,935 to \$148,400 depending upon qualifications and experience. Must be a United States citizen to apply. For further information or a copy of the vacancy announcement contact NCHS/ Human Resources Management Office on (301) 436-6052 or check the NCHS website at <http://www.cdc.gov/nchswww/nchshome.htm>.



The Centers for Disease Control and Prevention ensures equal employment opportunity for all persons, regardless of race, religion, color, sex, national origin, age, disability, or sexual orientation.

POSITIONS OPEN

Idaho State University, Department of Biological Sciences, anticipates a tenure-track position for **MOLECULAR GENETICIST** commencing August 1998. The successful candidate must hold a doctorate (postdoctoral experience preferred), will train students from undergraduate to doctoral levels, and will be expected to develop a research program with emphasis in gene regulation that complements existing faculty research strengths in molecular biology. Teaching responsibilities may include participation in introductory courses, undergraduate genetics, cell biology, and an advanced course in the candidate's area of specialization. The position will remain open until filled. Please send a letter of application, curriculum vitae, and statements of teaching philosophy and research goals, and have three letters of recommendation sent by November 30, 1997, to: **Geneticist Search Committee Chair, Department of Biological Sciences, Box 8007, Idaho State University, Pocatello, ID 83209-8007**. Information about the department, its programs, and new and existing facilities available to enhance research (Electron Microscopy and Molecular Research Core Facilities, Plant Sciences Research Building) can be found at **website: <http://www.isu.edu/departments/bios>**. Idaho State University is an Equal Opportunity/Affirmative Action Employer.

LECTURER WITH POTENTIAL FOR SECURITY OF EMPLOYMENT IN CHEMISTRY University of California, Irvine

The Department of Chemistry at the University of California, Irvine invites applications for two Lecturer positions. These positions parallel the research faculty series and both have the potential for security of employment. We seek outstanding Ph.D.'s with innovative ideas for undergraduate education at all levels to develop curriculum and instructional initiatives with national visibility. Applicants should send their curriculum vitae, a list of publications, and a description of their university-level teaching background and philosophy to: **Professor James Nowick, Chemistry Lecturer Search Committee, Department of Chemistry, University of California, Irvine, CA 92697-2025**. Applicants should also arrange to have three letters of recommendation submitted on their behalf. To ensure full consideration, applications and all supporting materials should be received by December 1, 1997. The University of California is an Equal Opportunity Employer committed to excellence through diversity.

RESEARCH ASSISTANT PROFESSOR IN CLINICAL PHARMACOLOGY

The Division of Clinical Pharmacology and Medical Toxicology in the Department of Medicine at the Uniformed Services University of the Health Sciences invites applications for the position of Research Assistant Professor in the area of pharmacokinetics and drug metabolism. The position is available immediately and provides full funding for salary and fringe benefits. Applicants must have a Ph.D. or Pharm.D. with appropriate postdoctoral training and direct experience in drug metabolism, pharmacokinetic analysis, and analytical experience including HPLC. Salary is commensurate with experience. Interested applicants please send a cover letter, curriculum vitae, and three letters of reference to: **Louis R. Cantilena, Jr., M.D., Ph.D., Director, Division of Clinical Pharmacology and Medical Toxicology, Room B2020, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799**.

USV LIMITED MOLECULAR BIOLOGISTS MOLECULAR MEDICINE RESEARCH LABORATORY

Applications are invited for Scientists, Ph.D. (eight years), research experience, for our recently established research laboratory. Successful applicants will integrate with our broadly based team of scientists for our recombinant section, and clinical diagnostics section.

Applicant should submit a curriculum vitae, a brief statement of research interests, copies of recent publications, and two references to: **Dr. S. Mishra, Molecular Medicine Research Laboratory, USV Limited, B.S.D. Marg, Govandi, Mumbai-400088, India. Telephone: 91-22-5564048/49/50/51; FAX: 91-22-5515608**. USV Limited is a research-led institution and is an Affirmative Action/Equal Opportunity Employer. Complete applications should be received before January 20th, 1998.

POSITIONS OPEN



United States Department of Agriculture
Agricultural Research Service

MOLECULAR BIOLOGIST, POSTDOCTORAL RESEARCH ASSOCIATE. Two-year position available to conduct research into viral pathogenesis as affected by host nutritional status. The research will investigate the molecular basis for increased virulence of coxsackievirus passed through mice deficient in antioxidant nutrients, utilizing recombinant DNA techniques, DNA sequencing, and site-directed mutagenesis. Research experience in these areas is desired. Starting salary \$39,270 to \$47,066. To apply, please send statement of research interests, curriculum vitae, and three letters of reference to: **Dr. Orville A. Levander, USDA, ARS, BHNRC, Nutrient Requirements and Functions Laboratory, Building 307, Room 201A, BARC-East, Beltsville, MD 20705-2350**. Applications must be marked 5E002. USDA/ARS is an Equal Opportunity Employer.

MICROBIOLOGIST

The Department of Biological Sciences at the University of New Orleans invites applications for a tenure-track **ASSISTANT PROFESSOR** position in microbiology, beginning fall 1998. Research area is open. The successful candidate will be expected to develop a vigorous research program in microbial biology and to participate in undergraduate and graduate teaching. Ph.D. is required and postdoctoral experience is strongly preferred. For more information, please visit us at **website: <http://www.uno.edu/~bios>**. Send curriculum vitae, statement of research interests, reprints, and three letters of recommendation by January 16, 1998, to: **Microbiologist Search Committee, Department of Biological Sciences, University of New Orleans, New Orleans, LA 70148. Telephone: 504-280-6307; FAX: 504-280-6121; e-mail: jfubs@uno.edu**. Equal Opportunity Employer/Affirmative Action.

ASSOCIATE RESEARCH SCIENTIST MOLECULAR AND CELLULAR IMMUNOLOGY

Position available immediately in a laboratory of the Department of Neurology, Columbia-Presbyterian Medical Center, to investigate autoimmune mechanisms of neurological diseases. Experience with monoclonal antibodies and the molecular biology of immunoglobulin genes desired. Salary commensurate with experience. Send cover letter, curriculum vitae, and names of three references to: **Norman Latov, M.D., Ph.D., Professor of Neurology, The Neurological Institute, Columbia-Presbyterian Medical Center, 710 West 168th Street, New York, NY 10032. FAX: 212-305-3986; e-mail: n12@columbia.edu**. Columbia is an Affirmative Action/Equal Opportunity Employer.

PLANT and/or TERRESTRIAL INVERTEBRATE ECOLOGIST. Massachusetts Audubon Society. Position based on Nantucket; some duties statewide. Continue/expand ongoing, long-term ecological research on effects of fire, grazing, and other management on coastal healthlands and grasslands; help develop and evaluate ecological management plans for the Society's wildlife sanctuaries; provide a scientific perspective on conservation issues on Nantucket. Ph.D. and five-plus years of research experience, excellent communication skills, ability to work independently and in a team, ability to perform field work and carry equipment over rough terrain, and a valid driver's license. Experience with fire ecology and New England biota a plus. Send curriculum vitae to: **Vanessa Rule, MAS, 208 South Great Road, Lincoln, MA 01773**. Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study insulin-regulated metabolic effects and membrane trafficking. Experience in biochemistry, molecular and cell biology is required. Send curriculum vitae, description of research interests, and three letters of recommendation to: **Dr. Assia Shisheva, Department of Physiology, 540 East Canfield, Wayne State University School of Medicine, Detroit, MI 48201. FAX: 313-577-5494; Telephone: 313-577-5674**.

Wayne State University is an Equal Opportunity/Affirmative Action Employer. All buildings, vehicles, and structures at WSU are smoke-free. Wayne State University—People working together to provide quality service.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS in reproductive biology. NIH-supported training opportunities in an interdepartmental, multidisciplinary program in a vital medical center. Research areas include: molecular aspects of growth and differentiation during embryogenesis; expression and function of cell surface components involved in embryo attachment and implantation; endocrine control and regulation of corpus luteum and endometrium; role of growth factors and oncogenes in growth and differentiation; regulation of ovarian function in human and primates; effect of aging on uterine leiomyoma; mechanisms regulating alternative RNA splicing in sexual differentiation; molecular events in spermatogenesis and reproductive toxicology; effects of chemotherapy and radiation on germ cell mutations; molecular mechanisms controlling gene activity and calcium homeostasis in testis and uterus; relationship of oncogene-regulated gene function to development and differentiation; regulation of growth factors by hormones, matrix components, and gravity; regulation of purine metabolism in placental development using transgenic approaches; regulation by steroids of cancers of the male and female reproductive tracts.

If interested, send curriculum vitae and two references to: **Dr. B. Sanborn, Department of Biochemistry and Molecular Biology, University of Texas Houston Medical School, P.O. Box 20708, Houston, TX 77225. Telephone: 713-500-6064; FAX: 713-500-0652; e-mail: bsanborn@utmmg.med.uth.tmc.edu; website: www-bmb.med.uth.tmc.edu/reprobio/consortium.html**.

The Training Program encourages applications from individuals from underrepresented minorities. Applicants must be U.S. citizens or permanent residents. The UTHSC is an Equal Opportunity Employer.

UNIVERSITY OF NEBRASKA-LINCOLN POSTDOCTORAL POSITIONS

The University of Nebraska is creating three Intracurricular Postdoctoral positions for undergraduate teaching in a new first-year liberal arts learning community program.

Applicants will design and teach a year-long course that traces the historical development of thought in one of the following areas: humanities, social sciences, or natural sciences/mathematics. Each course will emphasize critical learning and writing skills for freshmen.

The program provides an opportunity for recent Ph.D.'s to gain instructional guidance in undergraduate teaching in a setting of integrated learning with students, colleagues, and teaching mentors.

Two years, starting August 18, 1998. Rank: Lecturer or Visiting status. Salary: \$28,000.

Candidates should send curriculum vitae and a brief letter of interest specifying area of teaching interest, and requesting further information and application materials to: **Prof. Dan Crawford, Arts and Sciences, University of Nebraska, Burnett 229, Lincoln, NE 68588**.

Deadline for applications: February 1 or until positions are filled.

The University of Nebraska-Lincoln is committed to a pluralistic campus community through Affirmative Action and Equal Opportunity. We assure reasonable accommodation under the Americans with Disabilities Act; contact: **Prof. Dan Crawford at Telephone: 402-472-4392 for assistance**.

POSTDOCTORAL FELLOWSHIP/ RESEARCH ASSOCIATE

Opening(s) available for individual(s) to work on projects related to interactions between osteoblasts and hematopoietic cells. Minimal requirements include a Ph.D. in biochemistry, developmental biology, or a closely related discipline. Additional requirements include substantial experience in molecular biology and biochemistry, including expression, cloning, and protein purification. Level of appointment will be made depending upon qualifications of the individuals selected.

Interested candidates should send their curriculum vitae along with names and contact information for three references to:

Stephen G. Emerson, M.D., Ph.D.
Chief, Division of Hematology/Oncology
University of Pennsylvania School of Medicine
Maloney 510
3600 Spruce Street
Philadelphia, PA 19104

E-mail: emersons@mail.med.upenn.edu
University of Pennsylvania is an Equal Opportunity Employer, and applications from qualified underrepresented minorities are encouraged.

**International Graduate Student Fellowships
in Biodiversity and Conservation
at the American Museum of Natural History**

AMNH invites applications from *non-U.S. citizens* to enter a new doctoral program under the auspices of the Museum's Center for Biodiversity and Conservation. Students will study a diversified curriculum in systematics, biodiversity, conservation, and public policy. Through their training graduates of the program will advance environmental research and conservation programs in their countries.

Students should have a bachelors degree, and must fulfill university admission requirements which may include TOEFL. Students will receive full fellowship support for 12 months, and tuition will be fully paid; support is guaranteed for 4 years if the student remains in good standing. The student will be under the direction of a museum curator, and attend classes and seminars at both the Museum and the university.

Application Procedure:

Students must simultaneously apply to the Museum AND to one of 4 cooperating universities depending on field of study.

1. **Application to the Museum** is on prescribed forms and will include a résumé of the student's academic background, work experience, research interests, statement of purpose, and the names of two referees familiar with the student's work. Application deadline is January 31, 1998.

2. **Application to one of the universities** listed below should be made based on field of interest and submitted by the university's deadline date. Students should contact the university for application forms.

- **Evolutionary Biology: Office of Admissions, The Graduate Center of the City University of New York, 33 West 42 Street, New York, NY 10036-8099.**
E mail: jreid1@email.gc.cuny.edu.
Applications must be received by April 15, 1998.
- **Evolutionary Biology: Office of Student Affairs, The Graduate School of Arts and Sciences, Columbia University, Center for Environmental Research and Conservation, 10th Floor, Schermer Horn Extension, Mail Code 5557, 1200 Amsterdam Avenue, New York, NY 10027-6902.**
E-mail: ref8@columbia.edu.
Applications must be received by January 5, 1998.
- **Molecular Biology/Systematics: Graduate Admissions, Yale University, P.O. Box 208323, New Haven, CT 06520-8323.**
E-mail: graduate.admissions@yale.edu.
Applications must be received by January 2, 1998.
- **Entomology: Office of Admissions, The Graduate School, Cornell University, Sage Graduate Center, Ithaca, NY 14853-6201.**
Applications must be received by January 10, 1998.

Request Museum application forms
and further information from:

**Office of Grants and Fellowships, American Museum of
Natural History, Central Park West at 79th Street,
New York, NY 10024**

Telephone: 212-769-5017

Fax: 212-769-5495

E-mail: grants-and-fellowships@amnh.org

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you to utilize your current scientific expertise while working closely with other scientists to develop cutting-edge drug discovery tools. We invite you to apply your skills to change the world of drug discovery. Currently we are looking for high energy team players with the following backgrounds:

Ph.D. Cell Biologists

Seeking innovative team players responsible for the development and implementation of assays for high throughput automated screening and the characterization of active molecules discovered in these screens. The selected individuals will manage lead discovery teams of associates drawn from diverse disciplines. Applicants should have broad experience in mammalian cell biology with a specific emphasis on the generation of stable cell lines and construction of mammalian reporter systems. Additional experience in enzymology or receptor/ligand interactions is desired. A Ph.D. in the biological sciences with a minimum of 2 years of post-doctoral experience is required.

**Ph.D. Molecular
Biologists**

Seeking dynamic self-starters responsible for development and implementation of assays for high throughput automated screening and the characterization of active molecules discovered in these screens. Applicants should have broad experience in molecular biology with a specific expertise in models of mammalian transcription regulation and promoter characterization. The selected individuals will manage teams of associate scientists focused on lead discovery. Additional experience in phage display methodologies is desired. A Ph.D. in the biological sciences with a minimum of 2 years of post-doctoral experience is required.

With competitive compensation, benefits and a supportive professional environment, you'll have the power to achieve your career goals. For consideration, please send your resume to: **Sphinx Pharmaceuticals, Attn: Human Resources, 4615 University Drive, Durham, NC 27707; FAX: (919) 489-1308.** We are an Equal Opportunity Employer.

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POSITIONS OPEN

POSTDOCTORAL/SENIOR SCIENTIST POSITIONS

Four positions are available in the Laboratory of Genetics at the National Institute on Aging (NIA), Baltimore, Maryland.

Two Postdoctoral positions are in **Dr. Weidong Wang's** group. We have cloned all subunits within a human SWI/SNF complex involved in chromatin remodeling during development and differentiation. Projects include purification of novel tissue-specific chromatin remodeling complexes and cloning of their subunits.

Two positions are in **Dr. David Schlessinger's** group, based on their recovery of the gene responsible for X-linked ectodermal dysplasia (EDA). The goal is to analyze the regulation of genes involved in hair and sweat gland formation (Postdoctoral) with accompanying embryological studies (Senior Scientist) in the Ta mouse model.

Applicants must have a Ph.D. or M.D. and less than five years of appropriate research experience for Postdoctoral positions or six years or more for the Senior Scientist position. Send curriculum vitae and three letters of reference to: **A. Michaelis, GRC, Box 31, NIA, NIH, 4940 Eastern Avenue, Baltimore, MD 21224. E-mail: michaelisa@grc.nia.nih.gov** by December 31, 1997.

UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER

POSTDOCTORAL POSITIONS available for two- to three-year research training in cellular and molecular biology. The multidisciplinary NIH-funded program is based in the Institute for Environmental Medicine. Research emphasis is on protein processing, transcriptional regulation, cell membrane receptors, endo/exocytosis, lipid metabolism, and oxidative lung injury. Applicants require Ph.D., M.D., or equivalent degree and U.S. citizenship or permanent residency. We offer an exciting environment and competitive stipends.

To apply, **Telephone: 215-898-9100; FAX: 215-898-0868**, or write to:

Education Officer
Programs in Lung Cell and Molecular Biology
IFEM, University of Pennsylvania
1 John Morgan Building, 3620 Hamilton Walk
Philadelphia, PA 19104-6068
Website: <http://www.med.upenn.edu/~ifcm>

Qualified women and minority candidates are especially encouraged to apply. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS AVAILABLE

The Musculoskeletal Research Laboratory, Department of Orthopaedics and Rehabilitation, Penn State College of Medicine has several NIH-funded Postdoctoral positions available in bone and cartilage cell biology. Faculty research interests include age-related changes in bone and cartilage cell biology, gap junctional intercellular communication, biophysical signal transduction, membrane biophysics, cellular differentiation, and cell mechanics. For more information visit our website: <http://www.ortho.hmc.psu.edu/MRL.html>.

Send curriculum vitae and a statement of research interests to:

Henry J. Donahue, Ph.D.
Musculoskeletal Research Laboratory
Penn State College of Medicine
P.O. Box 850
500 University Drive
Hershey, PA 17033-0850
FAX: 717-531-7583
E-mail: hdonahue@ortho.hmc.psu.edu

POSTDOCTORAL POSITION DEPARTMENT OF STATISTICS THE UNIVERSITY OF CHICAGO

The Department of Statistics at the University of Chicago has received a Group Infrastructure Grant from NSF that will support up to three interdisciplinary Postdoctoral positions in statistics and some scientific discipline. Recent Ph.D.'s in any area of science, especially genetics, geophysics, or astronomy, who also have a research interest in the use and development of statistical methods for scientific inquiry are encouraged to apply. Undergraduate and graduate teaching opportunities are available. Interested applicants should send a résumé, statement of purpose, and arrange for two letters of reference to be sent to: **Peter McCullagh, GIG Postdoctoral Committee, Department of Statistics, The University of Chicago, 5734 University Avenue, Chicago, IL 60637. Equal Employment Opportunity.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS INFLAMMATION AND OXIDATION BIOCHEMISTRY

Two positions are available for qualified Ph.D., M.D.-Ph.D., or M.D. to study the role of oxidation reactions in inflammation and vascular disease. (1) Candidate is sought with demonstrated technical skill in electrospray mass spectrometry, HPLC, and GC/MS, and an interest in the development and validation of methods to analyze oxidative damage in model systems and man. (2) Candidate is sought to evaluate the role of specific oxidative pathways in intracellular and cell-cell signaling events. Background in signaling using molecular cloning and/or biochemical approaches, and experience with animal models optimal. Please send a curriculum vitae, cover letter explaining your background and interests, and the names of three references to: **Stanley L. Hazen, M.D., Ph.D., Department of Cell Biology, Lerner Research Institute, Cleveland Clinic Foundation, 9500 Euclid Avenue #NC-10, Cleveland, OH 44195. FAX: 216-444-9404.**

POSTDOCTORAL POSITION IN ECOLOGY

We are seeking one to two postdoctorals to join a large collaborative project examining the roles of forest buffers in protecting aquatic resources and riparian forests in the boreal mixed-wood forest. Funding will be through the NSERC Industrial Post-Doctoral Fellowship program in association with our major industrial partner. Qualifications: expertise in limnology, hydrology, or terrestrial ecology; the ability to work at different scales and to integrate large data sets. Expertise in GIS and environmental modeling would be an asset. Applicants should be highly interactive team players and be able to work effectively with industry and government partners. Salary: \$30,000-plus. Start: January-April 1998. Send curriculum vitae, statement of research interests, and three letters of reference to: **Dr. Ellic Prepas, Department of Biological Sciences, University of Alberta, Edmonton, Alberta T6G 2E9 Canada. Telephone: 403-492-3625; FAX: 403-492-8160; e-mail: cprepas@gpu.srv.ualberta.ca.**

POSTDOCTORAL POSITIONS IN EXPERIMENTAL ONCOLOGY

Postdoctoral positions are available immediately in the following areas: (1) molecular mechanisms of gene amplification and drug resistance (2) triplex-based oligonucleotide therapy of cancer. Preferred applicants will have a strong background in molecular biology and DNA replication and be fluent in English. Candidates should send a curriculum vitae, list of publications, and the names of three references to: **Dr. Daniel J. Fernandes, Chair, Department of Experimental Oncology, Hollings Cancer Center, Medical University of South Carolina, Charleston, SC 29425. E-mail: fernand@musc.edu. Medical University of South Carolina is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION VANDERBILT UNIVERSITY

To study pathogenesis and molecular genetics of *Helicobacter* and/or *Campylobacter* infections. Experience in molecular biology of prokaryotes necessary. Bioinformatics experience helpful. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Martin J. Blaser, A-3310 MCN, Vanderbilt University School of Medicine, Nashville, TN 37232. Telephone: 615-322-2035; FAX: 615-343-6160; e-mail: martin.blaser@mcm.vanderbilt.edu.**

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

POSTDOCTORAL POSITION WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

An immediate opening is available to study a multifunctional receptor LRP and its ER chaperone, RAP. The areas of research will include receptor biogenesis and trafficking along the secretory and endocytic pathways. Experience in molecular and cellular biology is desirable. FAX or e-mail curriculum vitae and names of three references to: **Dr. Guojun Bu, Washington University School of Medicine, Box 8116, St. Louis, MO 63110 USA. FAX: 314-454-2685; e-mail: bu@kids.wustl.edu. An Equal Opportunity/Affirmative Action Employer. Minority/Female/Disabled/Veterans.**

POSITIONS OPEN

Two POSTDOCTORAL RESEARCH FELLOW positions available January 1998.

Obesity gene regulation: Focus on transcriptional regulation of genes involved in pathogenesis of obesity in rodents and humans. Expertise in gene expression and transcriptional regulation required. Diabetes physiology: Address pathophysiology of genetically manipulated rodent models of NIDDM. Expertise in whole animal and *in vitro* physiology in rodents required.

Candidates should be self-motivated, meticulous, personable, independent, and creative. Submit curriculum vitae, description of current and future research activities, and list of three references with telephone and e-mail to: **R. L. Leibel, M.D., Division of Molecular Genetics, Department of Pediatrics, Columbia University, 1150 St. Nicholas Avenue, New York, NY 10032. FAX: 212-305-3020; e-mail: rl232@columbia.edu.**

Columbia University is an Equal Opportunity/Affirmative Action Employer. We are particularly interested in applications from women and members of minority groups.

POSTDOCTORAL POSITION TBP AND TAF STRUCTURE-FUNCTION STUDIES

A Postdoctoral position is available to examine the role of the TATA-Box Binding Protein TBP and its associated factors (TAFs) in transcription initiation complex formation in *Saccharomyces cerevisiae* (see *J. Biol. Chem.* 269:28335; 272:9436; *Proc. Nat. Acad. Sci. USA* 92:8224; *Biochemistry* 34:8005; *Mol. Cell. Biol.* 17:3081). We are currently using a combination of biochemical, genetic, and biophysical methods to study the interactions of these proteins with TBP, DNA, and other transcription factors. Interested parties should send a curriculum vitae and arrange to have three letters of reference sent directly to: **Dr. Tony Weil, Department of Molecular Physiology and Biophysics, Vanderbilt University, School of Medicine, Nashville, TN 37232-0615. FAX: 615-322-7236.**

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

INTERNATIONAL GRADUATE STUDENT AND POSTDOCTORAL FELLOWSHIPS

Applications are sought for positions in a project to study the macromolecular complex that catalyzes RNA editing in trypanosomes. This project will be conducted as an international collaboration between the Zentrum für Molekulare Biologie, Heidelberg; the Genzentrum München, Germany; and Seattle Biomedical Research Institute/University of Washington, USA. The project is designed to determine the functions of components of this complex as well as their organization in the complex using a variety of molecular biological, protein biochemistry, and gene knockout technologies. E-mail curriculum vitae and names and e-mail addresses of references to: **Christine Clayton, e-mail: cclayton@sun0.urz.uni-heidelberg.de; H. U. Goeringer, e-mail: goeringer@biochem.mpg.de; or Ken Stuart, e-mail: kstuart@u.washington.edu.**

Two POSTDOCTORAL RESEARCH POSITIONS. AIDS immunopathogenesis. Two Postdoctoral Research Associate positions are available to study (a) anti-HIV-1 cytotoxic T lymphocyte (CTL) responses in relation to HIV-1 genetic diversity and drug therapy, and (b) anti-SIV CTL responses in simian AIDS vaccine models. Candidates should be recent recipients of a Ph.D. or equivalent degree, and have experience in immunology and interest in studies of AIDS pathogenesis. Send curriculum vitae, a description of research experience and interests, and a list of references to: **Dr. Charles R. Rinaldo, A427 Crabtree Hall, University of Pittsburgh, Pittsburgh, PA 15261. FAX: 412-624-4953; e-mail: rinaldo+@pitt.edu. The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer. Applications from qualified women, minorities, and/or disabled persons are encouraged.**

POSTDOCTORAL POSITION PROTEIN NEUROCHEMISTRY

Position is available immediately to study changes in protein expression and activity in synaptic plasticity and learning, in the mature and aged rat brain. Experience in protein biochemistry is required. Please send curriculum vitae, two or more letters of recommendation to: **Dr. Gal Richter-Levin, the Laboratory for Behavioral Neuroscience, The Department of Psychology, University of Haifa, Haifa 31905, Israel. FAX: 972-4-8240966; e-mail: gal.r-l@psy.haifa.ac.il.**

**FACULTY POSITION
MOLECULAR GENETICS
THE OHIO STATE UNIVERSITY**

The Department of Molecular Genetics at The Ohio State University is initiating a search for a tenure-track faculty member at the Assistant Professor level. Candidates with exceptional qualifications may also be considered at the Associate Professor level. We are interested in applicants who are using molecular genetic approaches to study important topics in molecular, cell, and developmental biology of eukaryotic organisms. A highly competitive recruiting package is available, which includes an attractive salary, generous laboratory space, and substantial funds for equipment and initial operating expenses. The Ohio State University is undergoing a major expansion in the Molecular Life Sciences, which will involve the hiring of about 30 new faculty over the next few years. The Department of Molecular Genetics is a young, vigorous department that is playing a central role in this expansion. The Ohio State University is the flagship institution of the state's higher education system. It is located in the state capital, Columbus, which is a growing, yet highly affordable, metropolitan area of about 1.5 million people. Columbus has been ranked as one of the country's best places to live and work.

Applications should include a detailed curriculum vitae, a description of research experience, and a statement of the nature of the planned independent research program. Applicants should also arrange to have at least three recommendation letters sent to the department. Applications will be accepted until a suitable candidate is hired. Review of the applications will begin during January, 1998. Information about our Department and University can be obtained by contacting our website: <http://www.biosci.ohio-state.edu/~molgen/molgen.html>. Application materials should be sent to: Faculty Search Committee, Department of Molecular Genetics, The Ohio State University, 484 West 12th Ave., Columbus, OH 43210. OSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH SCIENTISTS

Battelle, a world leader in the development, application, and management of evolving or state-of-the-art technologies, is seeking experienced individuals to join a dynamic team in biotechnology. These positions require excellent verbal and written communication skills, and the ability to work as part of a team and on multiple tasks. **These positions are being offered for two to three years, contingent upon continued funding.**

• PROTEIN BIOCHEMIST

Requires a Ph.D. in chemistry, biochemistry, or a related field with expertise in protein or peptide chemistry. Experience in high throughput screening and/or combinatorial chemistry is desired. Salary range is \$35,000 - \$45,000 based on qualifications. **This work will be performed primarily at Battelle Northwest in Richland, WA.**

• MOLECULAR BIOLOGIST

Requires a Ph.D. in molecular biology, cell biology, biochemistry, or closely related field, with expertise in yeast or mammalian genetics and protein biochemistry. Salary range is \$35,000 - \$45,000 based on qualifications. **This work will be performed primarily at Battelle Columbus in Columbus, OH.**

Battelle offers a comprehensive package of compensation and benefits, as well as opportunities for professional challenge and development. Submit a resume and cover letter to: **Battelle, Dept. N258, 505 King Avenue, Columbus, OH 43201-2693.** Battelle is an Affirmative Action/Equal Opportunity Employer M/F/D/V.



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POSITIONS OPEN

POSTDOCTORAL POSITION THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

A Postdoctoral position is available immediately to study the transcriptional control of muscle development during *Drosophila* embryogenesis and to use cross-species approaches to identify evolutionarily conserved myogenic regulatory genes. Experience with *Drosophila* genetics is required. Please send curriculum vitae and names of three references to:

Dr. Eric N. Olson
Department of Molecular Biology and Oncology
University of Texas
Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75235-9148

An Equal Opportunity Employer.

The Unit on Gene Mapping and Expression of the Clinical Neurogenetics Branch, NIMH, NIH, is seeking a **STAFF FELLOW** to conduct positional cloning in bipolar disorder. This includes isolation of transcripts, high-resolution physical mapping, development of and scanning for polymorphisms/mutations. Applicants must have either a Ph.D. or an M.D. with relevant postdoctoral experience. A candidate with less experience will be considered if uniquely qualified. The scientist must have a strong interest and commitment in locating genes for a complex mental disorder in broad susceptibility regions. The period of research can begin as early as November 1997. Candidates should send their curriculum vitae and names of three references to: Dr. S. D. Detera-Wadleigh and Dr. Elliot S. Gershon, NIMH/NIH, Building 10 Room 3N218, 9000 Rockville Pike, Bethesda, MD 20892-1274. E-mail: sevilla@helix.nih.gov and elliotg@helix.nih.gov. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION HIV RESEARCH

Available immediately to study HIV infection and development of reagents for inhibiting infection and priming cellular immune responses using non-human primate models. Research experience in basic immunology and molecular biology is necessary. Additionally, experience in receptor biology, virology, and biochemistry will be useful. Opportunity to learn T-cell immunology (CTL and TH) including cytokine biology related to humans and non-human primates. Please send a curriculum vitae and names and addresses of three references to: Jagannadha K. Sastry, Ph.D., Department of Veterinary Sciences, The University of Texas M. D. Anderson Cancer Center, Science Park, Route 2, Box 151-B1, Bastrop, TX 78602. Telephone: 512-321-3991; FAX: 512-332-5218; e-mail: jksastry@flash.net.

Mayo **POSTDOCTORAL FELLOWSHIP**. Neurobiology of aging—Mayo Clinic Jacksonville is seeking applicants for a Postdoctoral Fellowship to study gene expression in the aging brain. The research in this laboratory addresses mechanisms of differential vulnerability of central cholinergic neurons in aging, particularly with respect to oxidative stress. Ongoing projects include studies of mRNA and protein for candidate genes, using methods of *in situ* hybridization histochemistry, immunocytochemistry, RT/PCR, differential display, and Western blotting. Applicants with graduate-level training in molecular neuroscience or biochemistry, and having an interest in aging research, should send their résumé and addresses of three references to: Dr. Michael McKinney, Ph.D., Mayo Clinic Jacksonville, 4500 San Pablo Road, Jacksonville, FL 32224. Mayo is an Affirmative Action/Equal Opportunity Educator and Employer.

POSTDOCTORAL POSITION CARDIAC GENE EXPRESSION/ DEVELOPMENT

The laboratory utilizes molecular techniques and transgenic mouse models, as well as knockouts, towards understanding cardiac development and tissue-specific gene expression. The applicant should have a Ph.D. or M.D. and experience with molecular techniques, tissue culture, or mouse genetics. Please mail or FAX your curriculum vitae and a one-page description of past research experience to: Dr. Jeffery D. Molkentin, Children's Hospital Medical Center, Division of Molecular Cardiovascular Biology, 3333 Burnet Avenue, Cincinnati, OH 45229-3039. FAX: 513-636-5958. Children's Hospital is an Affirmative Action/Equal Opportunity Institution. Women and minorities are encouraged to apply.

POSITIONS OPEN

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

The National Institutes of Health, Office of Education has both! For more information, visit our website, which lists an array of clinical and postdoctoral opportunities, including tenure-track positions.

To learn more, search:
<http://helix.nih.gov:8001/oe>.

POSTDOCTORAL POSITION NMR COUPLED MICROSEPARATIONS

Available immediately for an NIH-funded project developing liquid chromatography/NMR spectroscopy techniques. Research focuses on new small-volume NMR probes and LC interfaces for assaying mass limited complex samples using high-resolution NMR spectroscopy, and applying these methods to trace level peptide determination. The position will be jointly supervised by Dr. Jonathan Sweedler and Dr. Andrew Webb at the Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign. Send curriculum vitae and arrange for two letters of recommendation to: Andrew Webb or Jonathan Sweedler, 405 North Mathews Avenue, University of Illinois, Urbana, IL 61801. E-mail: sweedler@bozo.scs.uiuc.edu; FAX: 217-244-0105. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION EPITHELIAL DIFFERENTIATION The Ronald Perleman Department of Dermatology New York University Medical School

A Postdoctoral position available to study the roles of proteases and their inhibitors in regulating the growth and differentiation of mammalian epithelia (*J. Cell. Sci.* 108:3867, 1995; *PNAS* 92:679, 1995; *ibid.*, 93:9630, 1996). Background in molecular endocrinology, proteases, signal transduction, and extracellular matrix helpful but not required. Send curriculum vitae and names of three references to: Tung-Tien Henry Sun, Ph.D., Rudolf L. Baer Professor of Dermatology and Pharmacology, New York University Medical School, 550 First Avenue, New York, NY 10016. FAX: 212-263-8561; e-mail: sun01@mccr.med.nyu.edu.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY/ DNA DAMAGE REPAIR

Postdoctoral position available in the Department of Radiation Oncology to study DNA damage and recombination. Highly motivated candidates with an interest in improving gene therapy are encouraged to apply. Experience in molecular biology, tissue culture, DNA recombination, and virus/plasmid construction. Send curriculum vitae and the names and addresses of three references by mail or e-mail to: Dr. Craig Stevens, Department of Radiation Oncology, 2 Donner, University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104-4283. E-mail: stevens@xrt.upenn.edu. The University of Pennsylvania is an Equal Opportunity Employer.

STANFORD UNIVERSITY MEDICAL SCHOOL

POSTDOCTORAL POSITION to study mechanisms of insulin signal transduction. Background in biochemistry, cell biology, and/or molecular biology. Applicant should have gained a Ph.D. within the last three years. Send curriculum vitae and names of three references to: Dr. Richard Roth, Department of Molecular Pharmacology, Stanford University School of Medicine, Stanford, CA 94305. FAX: 415-725-2952; e-mail: rroth@stanford.edu.

POSTDOCTORAL POSITION available immediately for a qualified Ph.D. to join an active group studying the regulation of the GABA receptor following chronic drug treatment using whole-cell patch techniques in brain slices. Experience with *in situ* hybridization and immunocytochemical techniques an advantage. Send curriculum vitae and three references to: Dr. E. I. Tietz, Department of Pharmacology, Medical College of Ohio, Toledo, OH 43699. FAX: 419-383-2871; e-mail: tietz@gemini.mco.edu. Medical College of Ohio is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWS

Two positions are available immediately for Postdoctoral Fellows. Ph.D. and/or M.D. degree and strong background in basic immunology are required. Projects involve the characterization of the regulatory role of complement receptors CD21 and CD35 in B cell expansion and elimination *in vivo* (*Immunity* 4: 251-264, 1996; *Cur. Op. in Immunol.* 9:64-69, 1997). For details website: <http://www.med.harvard.edu/programs/pathol/carroll/home.html>. Contact:

Michael C. Carroll, Ph.D.
Department of Pathology
Harvard Medical School
200 Longwood Avenue
Boston, MA 02115
FAX: 617-432-2108

E-mail: mcarroll@warren.med.harvard.edu

POSTDOCTORAL POSITIONS (two) available at the Hormel Institute, University of Minnesota, Austin, Minnesota, to study sphingolipid domains and transport in cellular and model membranes. Fluorescence, monolayer, calorimetric, and freeze-etch EM approaches will be used to investigate how glycosphingolipid membrane organization regulates interaction with glycolipid transfer protein. Requires Ph.D. in biochemistry, molecular biology, or related area. Preference will be given to individuals with experience in approaches noted above and/or molecular biological cloning and/or protein purification techniques. Send curriculum vitae and names of three references by November 20, 1997, to: Dr. Rhoderick E. Brown, The Hormel Institute, University of Minnesota, 801 16th Avenue N.E., Austin, MN 55912. The University of Minnesota is an Equal Opportunity Educator and Employer.

TISSUE ENGINEERING POSTDOCTORAL RESEARCH ASSOCIATE. Battelle Northwest, Richland, Washington. A position is available immediately for a newly formed research area in biomaterials for wound care within the Battelle Bioprocessing Group. Applicants should possess a Ph.D. and/or M.D. in an area related to tissue engineering with direct expertise in dermatology, wound physiology, and skin cell cultivation techniques. Additional, desired skills include competency in mammalian cell molecular biology methods and development of models/protocols for animal testing. Interested applicants should send their current curriculum vitae and a list of at least three references to: Dr. Brian Hooker, Battelle, MSIN P7-41, Richland, WA 99352. E-mail: bs_hooker@pnl.gov; Telephone: 509-376-8258; FAX: 509-376-1867.

POSTDOCTORAL POSITION available to study functional significance of mating choice in three species of *Drosophila* on funded NSF project with PIs P. A. Gowaty and W. W. Anderson. Preference will be given to candidates who combine strong knowledge of evolutionary theory, social behavior, demography, statistics, or *Drosophila* biology with interests in behavioral ecology, evolution, quantitative genetics, and population genetics. Start date immediately or no later than early January 1998. Possibly renewable for a second year. Send curriculum vitae, a brief statement of research interests, selected reprints, and names of three references by 1 November to: Dr. W. W. Anderson, College of Arts and Sciences, New College, University of Georgia, Athens, GA 30602. The University of Georgia is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. The Johns Hopkins University, available immediately, to study the role of small G-proteins and reactive oxygen species in signal transduction in cardiovascular cells (see *Science* 275:1649, 1997). Should have experience with cell culture and molecular techniques. Must be U.S. citizen or permanent resident and have Ph.D. Send curriculum vitae and three references to: Kaikobad Irani, M.D., Ross 1023, Johns Hopkins University School of Medicine, 1721 East Madison Street, Baltimore, MD 21205. E-mail: kirani@welchlink.welch.jhu.edu.

POSTDOCTORAL POSITION available immediately to study the mechanisms of replication and transcription past site-specific DNA damage by human cell free extracts. Send curriculum vitae and three references to: Dr. John-Stephen Taylor, Department of Chemistry, Washington University, One Brookings Drive, St. Louis, MO 63130. Washington University is an Equal Opportunity/Affirmative Action Employer.

**AMERICAN MUSEUM
OF NATURAL HISTORY
FELLOWSHIPS AND GRANTS**

FELLOWSHIPS — Research Fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1998. The fellowships support independent research in association with the resident staff. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, earth and planetary sciences. All fellowship applications, including Chapman (Ornithology), should be postmarked by **January 15, 1998**.

GRANTS — Research grants are available to advanced predoctoral candidates and recent postdoctoral researchers in the fields of zoology and paleontology. Awards average \$1000.

Postmark dates vary for each grant program:

• Frank M. Chapman (Ornithology)

January 15, 1998

• Theodore Roosevelt (North American Fauna) **February 15, 1998**

• Lerner-Gray (Marine Zoology)

March 15, 1998

Request information and application forms from: **The Office of Grants and Fellowships, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.** E-mail: grants-and-fellowships@amnh.org.

ANNOUNCEMENT

Multilateral Initiative on Malaria in Africa (MIM)

**Call for Proposals for Malaria Research
Capability Strengthening in Africa**

The Task Force on Malaria Research Capability Strengthening in Africa invites applications for research-based capability strengthening grants in Africa covering, but not limited to, the following areas:

Antimalarial drug policy and chemotherapy — development of strategies for rapid mapping of drug resistance; innovative approaches for preventing and retarding the spread of resistance; definition of criteria for replacing first line drugs; identification, selection, and evaluation of alternative first and second line chemotherapies (including combinations); and development of new drugs based on clinical findings with traditional phytomedicine.

Epidemiology — the use of new technologies to identify parasite diversity in various settings; the relationship of parasite diversity to immune responses and host resistance; analysis of the relationship between transmission, infection, disease patterns, and deaths in order to design effective intervention strategies; development of methodologies to measure the impact of interventions including drugs, bednets, and vaccines on disease and parasite diversity; development of new approaches to testing vaccines and drugs in different populations including adults; and development of simple and rapid epidemiology mapping methods (e.g., based on clinical, age, and sex distributions).

Pathogenesis — studies on parasite-vector-host factors (including immune responses) involved in severe diseases and malaria in pregnancy, with the aim of developing and promoting improved preventive and case-management strategies.

Studies on vectors — application of newly developed molecular tools for studies on vector biology, feeding behavior, vectorial capacity, insecticide resistance, and population genetics with the aim of identifying and developing effective strategies for vector control in focal, low, and high transmission settings; and screening of natural local products for insecticide and repellent properties.

Health systems and operational research including social science — improvement of the home management of malaria based on community knowledge and practices; development and adaptation of products to enhance the case management of malaria at household level; improvement of collaboration between public and private health providers and the exploration of health sector reforms to enhance malaria control strategies.

The Task Force envisages providing grants of US\$ 50,000 to US\$ 250,000 per year for a period of one to three years. The grant proposal should be submitted and coordinated by an African national scientist working in a research group in Africa.

Application forms and further information are available from TDR in Geneva, WHO country representative offices in Africa, and Internet at <http://www.who.ch/programmes/tdr>. All applications MUST be received by 15 January 1998 at the following address: **Dr. Fabio Zicker, Manager, Task Force on Malaria Research Capability Strengthening in Africa, UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR), World Health Organization, 1211 Geneva 27, Switzerland. Telephone: (41-22)791-3805/3908; Fax: (41-22)791-4854; E-mail: zickert@who.ch.**

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Sertoli Technologies Inc., a start-up cellular therapy company, seeks **POSTDOCTORAL RESEARCH ASSOCIATE** in cell biology/tissue engineering to help further develop an exciting transplant technology for diabetes. Associate will be based in Charlotte, North Carolina, working with scientists at the Carolinas Medical Center developing *in vivo* immunoprivileged sites for co-transplanting pancreatic islets and Sertoli cells.

Experience in cell/molecular biology required. Background with Sertoli cells or islets a plus. Send letter and curriculum vitae to: Sertoli Technologies Inc., 101 North Wilmot Road, Suite 600, Tucson, AZ 85711-3365.

Neuroanatomist/Neurophysiologist: (**POSTDOCTORAL TO ASSISTANT PROFESSOR**) sought for identification of central neuronal pathways involved in regulation of sympathetic nervous system particularly in relationship to blood pressure, cerebral blood flow, and neuroprotection. Experience essential. Skills/knowledge in pathway tracing and chemical/molecular neuroanatomy. Familiarity with brainstem/cerebellar, hypothalamic networks. Experience in electrophysiology desirable. Contact: D. J. Reis/K. Koenig, Division of Neurobiology, Cornell University Medical College, 411 East 69th Street, New York, NY 10021. *Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.*

POSTDOCTORAL RESEARCH FELLOWSHIP

Creative scientist sought with research interests in hormonal control of blood pressure, fluid and electrolyte balance, and models of hypertension, to take leading role in research on renin-angiotensin-aldosterone system. Requires M.D. and Ph.D. degree in biochemistry or physiology; experience with *in vivo* physiological and *in vitro* molecular biology techniques; strong publication record. Salary \$30,000. Applications should include curriculum vitae, and three letters of reference. Mail to: Dr. Robert M. Carey, Professor of Medicine, University of Virginia School of Medicine, HSC, Box 482, Charlottesville, VA 22908.

UNIVERSITY OF CALIFORNIA SAN FRANCISCO POSTDOCTORAL POSITION

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

POSTDOCTORAL POSITION available to study the function of a novel family of Kunitz proteinase inhibitors produced by trophoblast of ruminant species. Applicant should have biochemical skills and preferably a career interest in either inflammation, reproductive biology, or developmentally regulated gene expression. Send curriculum vitae, cover letter, and names, addresses, and telephone numbers of three references to: Dr. R. Michael Roberts, 158 Animal Sciences Research Center, University of Missouri-Columbia, Columbia, MO 65211-5300. E-mail: michael_roberts@muccmail.missouri.edu.

POSTDOCTORAL POSITION

Position available to study the molecular basis of T cell tolerance. Experience with germ-line gene cloning and construction of library is required. Correspondence to: H. Zaghouni, The University of Tennessee, Knoxville, Department of Microbiology, M409 Walters Life Sciences Building, Knoxville, TN 37996. E-mail: hzagh@utk.edu. *The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer.*

POSTDOCTORAL POSITION available to study histopathologic consequences of traumatic brain injury. Ph.D. or M.D. with experience in brain anatomy, pathology, microscopy, and immunohistochemistry. Please send curriculum vitae to: Dr. Tracy McIntosh, University of Pennsylvania, Department of Neurosurgery, 3320 Smith Walk, Philadelphia, PA 19104-6316 USA.

POSITIONS OPEN

POSTDOCTORAL POSITION VISUAL SIGNAL TRANSDUCTION

Position available immediately to study signal transduction and visual pigment cycling in photoreceptors. Interact with groups exploring the molecular and structural biology of rhodopsins. Skills in electrophysiology and computer instrumentation, receptor biology, or retinoid chemistry preferred. Competitive salary, benefits, and research environment. Send letter of interest, curriculum vitae, and names of three references to: D. Wesley Corson, Ph.D., Department of Pathology and Laboratory Medicine, Medical University of South Carolina, Charleston, SC 29425. E-mail: corsondw@muscd.edu. See also website: www2.musc.edu/path/corson. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS MULTIDRUG RESISTANCE

Available immediately to investigate the function of multidrug resistance protein (MRP) in gene knockout cell and mouse systems. Applicants must have a Ph.D. or M.D.-Ph.D. Experience in cell or molecular biology and/or cancer research preferred. Send curriculum vitae and have three letters of recommendation sent to: Dr. Alan C. Sartorelli, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520-8066. FAX: 203-737-2045. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

One Postdoctoral position available to study epidermal/endothelial cell and basement membrane biology with applications to human skin disease including gene and protein therapy. A strong background in molecular biology is required. Send curriculum vitae and names of three references to: Dr. M. P. Marinkovich, Department of Dermatology, Stanford University School of Medicine, MSLS Building P204, Stanford, CA 94305. E-mail: mpm@stanford.edu; FAX: 650-723-8762.

Stanford University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

PH.D. FELLOWSHIPS IN LANDSCAPE STUDIES

Ph.D.-level NSF fellowships in spatio-temporal analysis of ecological and physical systems available in the Departments of Forest Science, Forest Resources, and Geosciences at Oregon State University, beginning fall term 1998. For application materials, contact: The Faculty Advisory Committee, NSF Graduate Traineeship Program, Department of Forest Science, Oregon State University, Corvallis, OR 97331-7501. Telephone: 541-737-6551; e-mail: serpag@fsl.orst.edu. Application deadline is February 1, 1998.

POSTDOCTORAL POSITION. Molecular Biologist/Biochemist to examine the effect of small aromatic hydrocarbon exposure on cytochrome P450 expression in extrahepatic tissues, and to examine the interactions among cytochrome P450 isozymes and reductase. Send résumé and three letters of reference to: Dr. Wayne L. Backes, Department of Pharmacology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112. *Louisiana State University Medical Center is an Equal Opportunity/Affirmative Action Employer.*

Two **POSTDOCTORAL POSITIONS** available to study renal development using knockout mice and organ culture. Background in molecular biology and/or developmental biology is preferred. Applicants should forward curriculum vitae, description of previous experience, and the names of three references to: Dr. C. Mendelsohn, Institute of Human Nutrition, Columbia University, PHI 5E-1512, Box 61, 630 West 168th Street, New York, NY 10032. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately at the Center for Cancer Research, MIT. To develop cell-based biosensors and to conduct related research in signal transduction and cell cycle control. Strong background in molecular biology, immunology, signal transduction, and/or cell cycle control is required. Send curriculum vitae, and three references to: Jianzhu Chen, Center for Cancer Research, MIT, E17-128, 40 Ames Street, Cambridge, MA 02139. E-mail: jchen@mit.edu.

POSITIONS OPEN

POSTDOCTORAL POSITION HARVARD UNIVERSITY

Position available to study the molecular determinants of oral carcinogenesis. Specific areas include the regulated expression and cell cycle control of the tumor suppressor gene deleted in oral cancer (doc-1). Qualified candidates should have a strong background in molecular biology and biochemistry. Please forward a curriculum vitae and names and telephone numbers of three references to: Dr. David Wong, Laboratory of Molecular Pathology, Harvard University, 188 Longwood Avenue, Boston, MA 02115. E-mail: dwong@warren.med.harvard.edu.

POSTDOCTORAL POSITION TEXAS A&M UNIVERSITY HEALTH SCIENCE CENTER

Postdoctoral position available to study alcohol-induced bone disease. Candidates should have experience in culture techniques and molecular biology of bone. Applicants should send curriculum vitae, description of research experience, and names of three references to: Dr. H. Wayne Sampson, Anatomy and Neurobiology, College of Medicine, Texas A&M University, College Station, TX 77843-1114 and refer to Job # 980176.

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POSTDOCTORAL POSITIONS in molecular biology and nucleic acid chemistry at the Laboratory for Molecular Science of the University of Southern California. Basic interdisciplinary research related to the construction of a molecular computer (L. Adleman, "Molecular computation of solutions to combinatorial problems," *Science* 266:1021-1024, November 11, 1994). Research directed by Professors Leonard Adleman and Myron Goodman. Please submit three letters of reference and curriculum vitae to: Dr. Nickolas Chelyapov, USC/Molecular Biology—ACB 530, 835 West 37th Street, Los Angeles, CA 90089-1340. E-mail: delapaz@pollux.usc.edu.

POSTDOCTORAL POSITION available immediately at the Barbara Ann Karmanos Cancer Institute at Wayne State University to study the remodeling of immune system through bone marrow transplantation. The candidate should have a Ph.D. and a strong background in immunology and hematology. Molecular Immunologists are encouraged to apply. Send curriculum vitae with names of three references to: A. Galy, Ph.D., Karmanos Cancer Institute, 110 East Warren Avenue, Detroit, MI 48201.

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

Molecular Neurobiologist/Immunologist: (**POSTDOCTORAL TO ASSISTANT PROFESSOR**) to study molecular mechanisms of neuroprotection/neuronal death *in vivo* in multidisciplinary neuroscience group. Background/experience in inflammation (cytokines), neurotrophic factors, cell adhesion molecules, intracellular signaling, apoptosis, and/or genomics. Contact: D. J. Reis/K. Koenig, Division of Neurobiology, Cornell University Medical College, 411 East 69th Street, New York, NY 10021. *Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.*

POSTDOCTORAL FELLOWSHIP available for the identification and characterization of tumor-suppressor genes in brain and breast cancer. Candidates should have experience in molecular biology. Applicants must hold a Ph.D. or M.D.-Ph.D. degree. Send curriculum vitae; cover letter; and names, addresses, and telephone numbers of three references to: Dr. Ramon Parsons, Columbia University, College of Physicians and Surgeons, Room 14-453, 630 West 168th Street, New York, NY 10032. E-mail: rep15@columbia.edu.

ANNOUNCEMENT

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Lawrence Shattuck, M.Ed., The New England College of Optometry, The Office of Admissions, 424 Beacon Street, Boston, MA 02115.

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COURSES & TRAINING

BECKMAN RESEARCH INSTITUTE—CITY OF HOPE NATIONAL MEDICAL CENTER PREDOCTORAL PROGRAM IN BIOLOGICAL SCIENCES is accepting applications for admission to the September, 1998 class. Specialties are in molecular biology, macromolecular structure, neurosciences, and medically related areas. Students must have advanced coursework, research experience, or a Master's degree in biology or chemistry. Application deadline February 1, 1998. Contact: Thomas R. LeBon, Ph.D., Graduate Education Coordinator, City of Hope Graduate School, Duarte, CA 91010-3011. Telephone: 626-359-8111, ext. 3641; FAX: 626-930-5440; e-mail: tlebon@smtpink.coh.org; website: <http://www.cityofhope.org/research/graduate/graduate.htm>.

FELLOWSHIP

Suitable applicants are sought for a National Research Council (NRC) **FELLOWSHIP** (two years duration) that is available at NIOSH-CDC in Morgantown, West Virginia. The appointee will focus studies on the molecular epidemiology of breast cancer. Applicants with MPH training who are strongly motivated to master cutting-edge, basic laboratory methods are desirable. Stipend will be in the range \$32,000 to \$45,000 depending on qualifications and experience. Curriculum vitae, names of three referees, and a concise statement of long-range career goals should be sent to: Ms. Helen Michael, MS-L3014, NIOSH-CDC, 1095 Willowdale Road, Morgantown, WV 26505-2888. Application deadline: January 15, 1998. CDC/NIOSH is an Equal Opportunity Employer and offers a smoke-free workplace.

MEETING

COLLOQUIUM ON SCIENTIFIC ADVANCES AND THE FUTURE IN TOXICOLOGIC RISK ASSESSMENT. December 4-5, 1997, at the National Academy of Sciences, Washington, D.C. Celebrating the Fiftieth Anniversary of the National Research Council's Committee on Toxicology. Colloquium will cover recent developments in toxicology, mechanistic considerations in toxicologic risk assessment, risk characterization, and use of toxicologic data in risk management. For more information contact: Ms. Linda Leonard, FAX: 202-334-1393; e-mail: lleonard@nas.edu.

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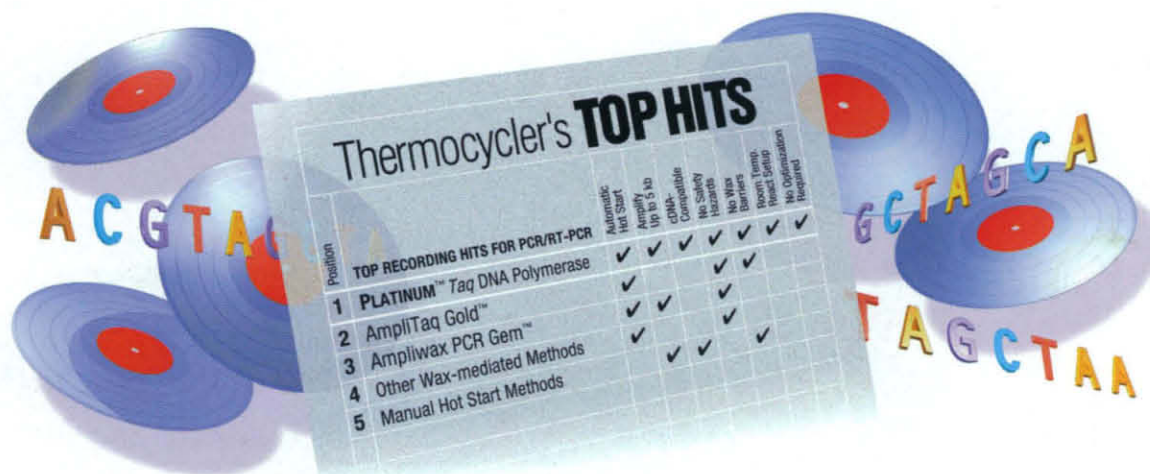
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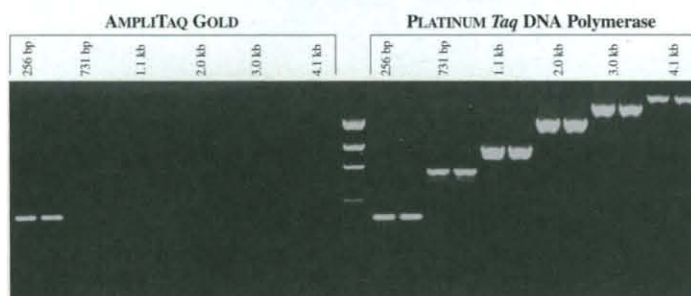
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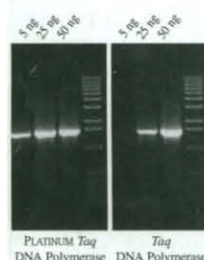


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