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## 1999-2000 Congressional Science and Engineering Fellowships

**PROGRAM:** Fellows spend one year working as special assistants on the staffs of members of Congress or congressional committees, working in legislative areas requiring scientific and technical expertise. The program includes an orientation on congressional and executive branch operations and a year-long seminar program on issues involving science and public policy. Fellows receive stipends from their sponsoring societies.

**PURPOSE:** To provide a unique public policy learning experience, to demonstrate the value of science-government interaction, and to make practical contributions to the more effective use of scientific and technical knowledge in government.

**CRITERIA:** A prospective Fellow must be a postdoctoral to midcareer scientist or engineer; demonstrate exceptional competence in some area of science or engineering; be cognizant of many matters in nonscientific areas; demonstrate sensitivity toward political and social issues; and perhaps most important, have a strong interest and some experience in applying personal knowledge toward the solution of societal problems.

**SPONSORS:** More than twenty-five national professional scientific and engineering societies will sponsor or cosponsor Congressional Science and Engineering Fellows in 1999-2000.

American Association for the Advancement of Science	American Society of Civil Engineers
American Association of Colleges of Pharmacy	American Society of Human Genetics
American Chemical Society	American Society of Limnology and Oceanography
American Dental Association	American Society of Mechanical Engineers
American Geological Institute	American Veterinary Medical Association
American Geophysical Union	American Welding Society
American Institute of Biological Sciences	Computing Research Association
American Institute of Physics	Endocrine Society
American Physical Society	Federation of Animal Science Societies
American Podiatric Medical Association	Geological Society of America
American Psychological Association	Institute of Electrical and Electronics Engineers
American Society for Microbiology	Institute of Food Technologists
American Society of Agronomy/Crop Science Society of America/Soil Science Society of America/Weed Science Societies	International Society for Optical Engineering
	Materials Research Society
	Optical Society of America

Applicants should apply directly to the appropriate professional society. It is acceptable to apply to more than one society. Stipends, application procedures, timetables, and deadlines vary by society. Minorities and persons with disabilities are encouraged to apply. Further information about the program and a list of the participating societies, with mailing addresses and contact people, is available from:



AMERICAN ASSOCIATION FOR THE  
ADVANCEMENT OF SCIENCE

Congressional Science and Engineering Fellowship Program

1200 New York Avenue, NW, Washington, DC 20005

202/326-6600 Fax: 202/289-4950 Email: [science\\_policy@aaas.org](mailto:science_policy@aaas.org)

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# THE LEADER IN SCIENCE

## Dinosaur Impressions

Postcards from a Paleontologist

**Philippe Taquet**

"...a book that's an oddly sweet mix of ephemera and hard science."

—Publishers Weekly

Originally published in 1994 in French, *Dinosaur Impressions* is the engaging account of thirty years of travel and paleontological exploration by Philippe Taquet, one of the world's most noted paleontologists. Dr. Taquet takes the reader on a surprisingly far-flung tour ranging from the Provence countryside to the Mongolian Steppes in search of dinosaur bones and what they have to tell us about a vanished world. With wry humor and lively anecdotes, Dr. Taquet retraces the history of paleontological research, along the way discussing the latest theories of dinosaur existence and extinction.

1998 256 pp. 0-521-58372-1 Hardback \$24.95

## Earth at a Crossroads

Paths to a Sustainable Future

**Hartmut Bossel**

*Earth at a Crossroads* offers an integrated view for the development of human society within the natural environment on which it depends for support. Two alternative visions of the future are presented: Path A resulting from continuation of current trends, and a contrasting Path B that would result from adhering to principles of sustainability and protection of the natural system in the interests of future generations.

1998 352 pp. 0-521-63005-3 Hardback \$59.95  
0-521-63995-6 Paperback \$19.95

## Destiny or Chance

Our Solar System and its Place in the Cosmos

**Stuart Ross Taylor**

Written by a leading planetary scientist, this book tells the remarkable story of how our solar system came into existence. In a whirlwind adventure, Dr. Taylor shows how the formation of mighty Jupiter dominated the solar system, why Mars is so small, where comets come from, how rings form around planets, why asteroids exist, and why Pluto isn't a planet at all. En route we discover how chance events have shaped the course of history in our solar system.

1998 256 pp. 0-521-48178-3 Hardback \$24.95

## Atlas of the Universe

**Patrick Moore**

Put the Universe at your fingertips with this dramatic and comprehensive look at the sky. Richly illustrated with hundreds of recent photographs and images from ground-based telescopes, the Hubble Space Telescope, and interplanetary spacecraft, *Atlas of the Universe* is a definitive reference to the stars, the planets and their moons, and the universe.

1998 c.288 pp. 0-521-64210-8 Hardback about \$39.95

## Life on Other Worlds

The 20th-Century Extraterrestrial Life Debate

**Steven J. Dick**

"Amazingly comprehensive, as well as highly entertaining...I almost wish it would put an end to the outpouring of books on the subject; nothing more need be written, until the feared/long-hoped for moment of Revelation!"

—Sir Athur C. Clarke, CBE

1998 304 pp. 0-521-62012-0 Hardback \$24.95

## The Search for Life on Other Planets

**Bruce Jakosky**

In this volume Jakosky offers a scientific foundation for thinking there may be life elsewhere in the Universe. Using the early history of the Earth and the conditions that would allow life to exist, he creates a sound, scientific foundation for the possibility of life on planets other than our own.

1998 336 pp. 0-521-59165-1 Hardback \$59.95  
0-521-59837-0 Paperback \$19.95

## The Golem at Large

What You Should Know About Technology

**Harry Collins and**

**Trevor Pinch**

This follow-up to the successful *The Golem: What You Should Know About Science* uses a series of case studies to demonstrate that imperfections in technology are related to uncertainties in science. The case studies include the role of the Patriot anti-missile missile in the Gulf War, the Challenger space shuttle tragedy, analysis of the Chernobyl nuclear disaster, and the contribution of lay expertise to the analysis of treatments for AIDS.

1998 180 pp. 0-521-55141-2 Hardback \$19.95

## Enchanted Looms

Conscious Networks in Brains and Computers

**Rodney Cotterill**

The mind works in mysterious ways. Its evolution, structure, and functions have long baffled scientists and philosophers alike. In this controversial volume, Rodney Cotterill suggests that an explanation of consciousness is now at hand. *Enchanted Looms* may forever change our view of consciousness and our concept of the human mind.

1998 400 pp. 0-521-62435-5 Hardback \$24.95

## Magic Molecules

How Drugs Work

**Susan Aldridge**

This book is a unique guide for the general reader to the drugs of everyday life—from commonly prescribed medicines to recreational drugs (including illicit ones) and food supplements. The author examines how drugs interact with their targets in the body, where drugs come from, how they are developed, and what new kinds of drugs are on the horizon.

1998 282 pp. 0-521-58414-0 Hardback \$24.95

## Dying to Live

How our Bodies Fight Disease

**Marion D. Kendall**

Written in a clear and accessible style, this book gives an up-to-date account of the inner workings of our immune systems. Aimed at the lay reader, it examines important areas of medical science such as fever, AIDS and cancer. The author looks at vaccinations and how pathogens evade their effects and considers the impact of lifestyle, stress, exercise, dietary, and hereditary factors on our ability to fight disease.

1998 240 pp. 0-521-58479-5 Hardback \$24.95

## Cambridge Dictionary of Statistics

**B.S. Everitt**

This volume is a reliable sourcebook containing simple definitions and explanations of statistical concepts. It includes some 3,000 terms used in all areas of statistics, including medicine, biology, economics, operations research, and surveys.

1998 300 pp. 0-521-59346-8 Hardback \$39.95

Available in bookstores or from

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UNIVERSITY PRESS

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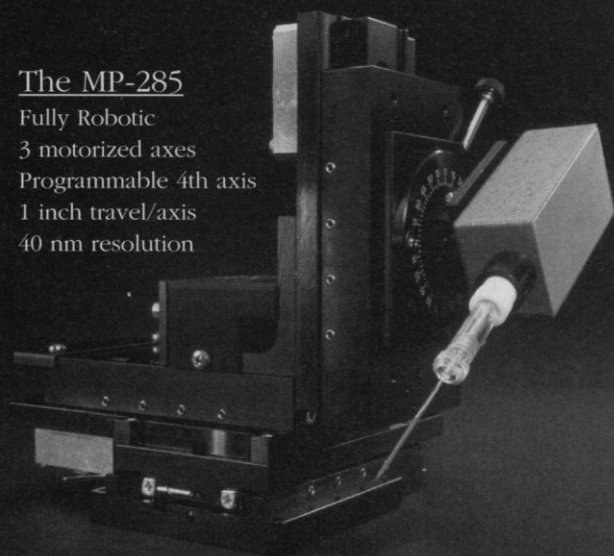
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## AAAS SCIENCE AND TECHNOLOGY POLICY YEARBOOK

Albert H. Teich, Stephen D. Nelson  
and Celia McEnaney, editors

Covering major developments during 1997, the new *AAAS Yearbook* is a concise yet comprehensive source of information on current policy issues affecting science and technology. Included are papers from the 1997 AAAS Science and Technology Policy Colloquium together with other key articles and speeches critical to 1997. Working scientists, engineers, government policymakers and administrators, industrial managers, scholars and students of science and technology policy, and many others will find this book an invaluable resource. Special quantity discounts are available for classroom use.

1997; 439 pages; \$24.95 (AAAS member price \$19.96)  
Postage/handling per order \$4.00  
AAAS Distribution Center  
PO Box 521, Annapolis Junction, MD 20701  
Order by phone (VISA/MasterCard only) call 1-800-222-7809  
Fax orders to 301-206-9789



AMERICAN ASSOCIATION FOR THE  
ADVANCEMENT OF SCIENCE

## A Science Advertising Supplement



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# Gordon Research Conferences

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

## 1999 Winter and Spring



### 1999 WINTER / SPRING CONFERENCE FEES

	Conferee			Adult Guest		
	Single	Double	Non-Res	Single	Double	Non-Res
California	\$785	\$690	\$560	\$615	\$520	\$390
California 3-Day *	\$385	\$330	\$250	\$385	\$330	\$250
Il Ciocco, Italy	\$805	\$720	\$570	\$635	\$550	\$400

\*Conferees attending both **Metals in Biology** and the 3-day **Graduate Research Seminar** should add \$295 to the 5-day single room rate or \$260 to the 5-day double room rate.

The 1999 Winter and Spring Gordon Research Conferences will be held in Southern California and the Tuscany region of Italy.

Attendance is limited - it is recommended that applicants apply immediately for early consideration by the Chair.

NOTE: Be sure to check the actual start and end times of each meeting, which may vary by Conference.

#### DIRECTOR

Carlyle B. Storm

#### DIRECTOR EMERITUS

Alexander M. Cruickshank

The Gordon Research Conferences web site at <http://www.grc.uri.edu/> contains the most up-to-date information we have for any given Conference. Be sure to take a look at the scientific program, the conference schedule, or any other information that has been posted. Certain conferences, as noted below, have created their own web sites as well.

Applications to any conference can be submitted via our web site at <http://www.grc.uri.edu/>, or feel free to copy the blank application form. You may also request more forms or additional information from the:

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Phone: 401-783-4011, ext. 100

*The international Gordon Research Conferences were established with the continuing support of the Ares-Serono Foundation.*

#### AGRICULTURAL SCIENCE: GENOMICS IN CROP PRODUCTION

HARBORTOWN RESORT  
VENTURA, CA  
FEBRUARY 14 - 19, 1999  
Daniel O'Keefe & David Sands,  
Co-Chairs  
Bruce Hammock & Mark Stidham,  
Co-Vice-Chairs

- Plant and Pest Sequencing Projects
- Bioinformatics
- From Sequence to Function
- Genomics in Crop Quality Traits
- Genomics in Crop Protection Strategies
- Gene Organizational Functions
- Host / Pest Interactions
- Strategies For Containment

#### ANTIMICROBIAL PEPTIDES

IL CIOCCO  
BARGA, ITALY  
APRIL 25 - 30, 1999  
Jules Hoffmann, Chair  
Charles Bevins & Robert Hancock,  
Co-Vice-Chairs

- Novel Structural Aspects, Novel Methodologies
- Antimicrobial Peptides in Innate Immunity
- Resistance Strategies of Microorganisms

- Mode of Action
- Medical and Agricultural Applications

#### BARRIER FUNCTION OF MAMMALIAN SKIN

IL CIOCCO  
BARGA, ITALY  
APRIL 18 - 23, 1999  
Hans Schaefer, Chair  
Christopher Cullander, Vice-Chair  
<http://skin-barrier.org/>

- Optical Properties of the Barrier
- Barrier Formation
- Structure Penetration Relations
- Models and Methods
- Barrier Formation
- Pathology and Repair
- Antimicrobial Barrier
- Tape-Stripping Technique
- Hot News

#### BIOANALYTICAL SENSORS

HOLIDAY INN  
VENTURA, CA  
JANUARY 10 - 15, 1999  
David R. Walt, Chair  
Leanna Levine, Vice-Chair

- Receptor Design
- Genosensors
- Novel Materials
- High Sensitivity Sensing

- New Transduction Mechanisms
- Artificial Systems

#### BIODEGRADABLE POLYMERS

DOUBLETREE HOTEL  
VENTURA, CA  
MARCH 7 - 12, 1999  
Graham Swift, Chair  
Michel Vert, Vice-Chair

- Polymers and the Environment
- Dual Role of Enzymes: Degradation and Synthesis
- Biodegradable Synthetic Polymers
- Biodegradable Polymer Blends
- Polymers from Nature
- Biomaterials
- Future Opportunities / Directions

#### CAE IN POLYMER PROCESSING

HARBORTOWN RESORT  
VENTURA, CA  
MARCH 14 - 19, 1999  
Andrew N. Hrymak, Chair  
Charles L. Tucker, III, Vice-Chair

- Stability of Flows and the Polymer/Wall Interface
- Solids Conveying and Melting
- Contributed Posters
- Die Flows
- Twin Screw Extruders and Mixing
- Fibers and Films
- Injection Molding

- Blow Moulding and Thermoforming
- Solidification and Structure Development
- Future Directions
- Plans for 2001

#### CHEMISTRY & PHYSICS OF CEMENT-BASED MATERIALS

IL CIOCCO  
BARGA, ITALY  
MAY 9 - 14, 1999  
Tom Mason & Luigi Cassar, Co-Chairs  
Jim Beaudoin, Vice-Chair

- Conference Focus: Interfaces
- Hydration
- Modeling/Simulation
- Dispersion/Rheology
- Water: Solid and Liquid
- Shrinkage
- Transport
- Polymer-Cement Interactions
- Fracture/Composites
- Hot Topics/New Directions



**CHEMICAL REACTIONS AT SURFACES**

HOLIDAY INN  
VENTURA, CA  
FEBRUARY 28 - MARCH 5, 1999  
John T. Yates, Jr., Chair  
John C. Hemminger, Vice-Chair

- Atomic Scale Probing of Adsorbed Molecules, Surface Reactions and Interactions
- Nanochemistry on Surfaces
- Mesotropic Surface Phenomena
- Biomolecules and Self Assembly on Surfaces
- Theory - Metal and Semiconductor Surface Chemistry
- New Technological Connections - Electrochemical Synthesis; Gas Microsensor

**CHEMOTHERAPY OF AIDS**

HOLIDAY INN  
VENTURA, CA  
MARCH 14 - 19, 1999  
Carl Dieffenbach, Chair  
Dale Kempf, Vice-Chair

- Target Cell Dynamics and Treatment Failure
- HIV Drug Resistance and Viral Fitness
- New Antivirals and Therapeutic Targets
- Next Generation of Protease and Reverse Transcriptase Inhibitors
- Long Term Side Effects of HAART
- Acute HIV Infection and Immune Responses Post-HAART
- Inhibitors of HIV Binding and Entry
- Clinical Trials: Challenges for the Future
- Reservoirs of HIV: Is Eradication Achievable?

**CHRONOBIOLOGY**

IL CIOCCO  
BARGA, ITALY  
JUNE 13 - 19, 1999  
Eberhard Gwinner, Chair  
Nicholas Mrosovsky, Vice-Chair

- Human Circadian Pathologies and their Treatment
- Adaptive and Evolutionary Aspects of Circadian Rhythms
- Molecular Mechanisms I, II
- Pineal and Retinal Rhythms
- The SCN as a Pacemaker
- Circadian Photoreception
- Multiple Oscillators, Multiple Pacemakers
- Sleep

**CLUSTERIN (ApoJ) & ApoE IN TISSUE REMODELING (NEW)**

HOLIDAY INN  
VENTURA, CA  
JANUARY 24 - 28, 1999  
Caleb Finch & Judith Harmony, Co-Chairs

- Overview Lectures
- Cell Stress and Cell Death in Expression of ApoJ and ApoE
- ApoJ and ApoE Gene Expression and Biogenesis
- ApoJ and ApoE Tissue Remodelling, Part I: ApoJ and ApoE Transport

- ApoJ and ApoE Tissue Remodeling, Part II: Amyloid-Peptide Interactions with ApoJ and ApoE
- ApoE/ApoJ Functions in Neurodegeneration and Vascular Disease
- Towards a Synthesis

**COMPOSITES**

DOUBLETREE HOTEL  
VENTURA, CA  
JANUARY 10-15, 1999  
Richard Parnas, Chair  
Dan Wagner, Vice-Chair

- New Applications
- Role of Viscoelasticity
- Damage Tolerance in CMC
- CMC & C/C Microstructure
- Fiber Architecture Effects
- Compressive Failure
- Nanocomposites
- Processing and Microstructure
- How Do Composites Succeed?

**COMPUTATIONAL ASPECTS OF BIOMOLECULAR NMR (NEW)**

IL CIOCCO  
BARGA, ITALY  
JUNE 6 - 11, 1999  
Jeffrey C. Hoch, Chair  
David Case & Michael Nilges, Co-Vice-Chairs  
<http://www.rowland.org/hoch/grc.html>

- Keynote and Frontiers I, II
- Spectrum Analysis and Spectral Assignment
- Chemical Shifts and Anisotropies
- Relaxation
- Structure Calculation
- MD Simulation
- Nucleic Acids
- Dynamic Disorder, Structural Heterogeneity, and Complexes
- New Sources of Structural and Dynamical Data

**ELECTROCHEMISTRY**

DOUBLETREE HOTEL  
VENTURA, CA  
JANUARY 17 - 22, 1999  
Jim McIntyre, Chair  
Neal Armstrong, Vice-Chair

- Electrochemistry and Living Systems
- Conductive Polymers
- Electrochemistry and Heterogeneous Catalysis
- Materials and Characterization Methods
- Intramolecular Charge Transport
- Batteries and Fuel Cells
- Scanning Electrochemical Microscopy
- Charge Transport through Thin Layers
- Open Session

**FIBRONECTIN, INTEGRINS, & RELATED MOLECULES**

HOLIDAY INN  
VENTURA, CA  
JANUARY 31 - FEBRUARY 5, 1999  
Caroline Damsky, Chair  
Eric Brown, Vice-Chair

- Fibronectin, Matrix Assembly and Signaling
- Cooperative Signaling by Integrins and Associated Receptors
- Keynote: Tony Pawson: Receptors and Modular Signaling Proteins in Cellular Interactions
- Integrin Activation and Signaling I, II
- Adhesion and Disease
- Signaling from the Cytoskeleton
- ECM: Growth and Survival
- ECM, Integrins and Development

**GASEOUS IONS, STRUCTURE, ENERGETICS & REACTION DYNAMICS**

DOUBLETREE HOTEL  
VENTURA, CA  
FEBRUARY 28 - MARCH 5, 1999  
Tomas Baer, Chair  
Peter B. Armentrout, Vice-Chair  
<http://www.unc.edu/depts/chemistry/gordon/index.html>

- Ions in Intense Laser Fields
- Biomolecules
- Environmental Chemistry and Aerosols
- Ion Molecule Reactions with State Selection
- Ion Molecule Reactions in Extreme Environments
- Ion Structure and Reactivity
- Spectroscopy and Thermochemistry of Ions
- Fullerenes and Clusters

**GLYCOBIOLOGY**

HARBORTOWN RESORT  
VENTURA, CA  
FEBRUARY 21 - 26, 1999  
Annette Herscovics, Chair  
Anne Dell, Vice-Chair

- Impact of Genomics on Glycobiology
- Glycosylation in Protein Folding and Intracellular Targeting
- Yeast Glycoconjugates
- Extracellular Carbohydrate Receptors
- Glycoconjugates in Immune Function
- Glycoconjugates in Development
- Glycolipids and Proteoglycans, Functional Aspects
- Microbial Glycoconjugates and Virulence
- Glycosylation Diseases and Therapy

**GRADUATE RESEARCH SEMINAR: BIOINORGANIC CHEMISTRY (3-DAY)\***

HARBORTOWN RESORT  
VENTURA, CA  
JANUARY 28 - 31, 1999  
Matthew J. Ryle, Chair  
Megan Nunez, Vice-Chair

- Model Systems for Metalloprotein Active Sites
- Metals and Metabolism
- Metal/Metalloprotein-Nucleic Acid Interactions
- Metalloprotein Structure and Function
- Electron Transfer Reactions

**HYDROCARBON RESOURCES**

HOLIDAY INN  
VENTURA, CA  
JANUARY 17 - 22, 1999  
John H. Shinn, Chair  
Akira Tomita, Vice-Chair

- Hydrocarbon Resources in the 21<sup>st</sup> Century
- Advances in Compositional and Instrumental Approaches to Hydrocarbon Chemistry
- Computational Approaches to Hydrocarbon Reaction Chemistry
- Frontiers of Catalysis in Hydrocarbon Reactions
- High-Temperature Hydrocarbon Chemistry
- Advances in Carbon Materials: Nano-Structures and Catalysts
- Membrane Reactors
- Advances in Methane Conversion Chemistry
- Plenary Address

**IMMUNOCHEMISTRY & IMMUNOBIOLOGY**

IL CIOCCO  
BARGA, ITALY  
MAY 30 - JUNE 4, 1999  
Dan Littman, Chair  
John Kappler, Vice-Chair

- MHC Biosynthesis and Antigen Presentation
- Mechanisms Regulating Lymphocyte Receptor Diversity
- Signals in Lymphocyte Development
- Tracking Immune Responses in vivo
- Lymphocyte Decisions in the Periphery
- Mechanisms of Innate Immune Regulation
- Genomics and the Immune System
- Lymphoid Organogenesis
- Strategies for Enhancing Immunity

**INORGANIC REACTION MECHANISMS**

HARBORTOWN RESORT  
VENTURA, CA  
FEBRUARY 28 - MARCH 5, 1999  
Dale W. Margerum, Chair  
Peter C. Ford, Vice-Chair

- Atom-Transfer Reactions
- Conformationally-Controlled Electron-Transfer Reactions
- Organometallic Mechanisms I, II

- O-O Bond Formation and Cleavage in Respiration and Photosynthesis;  
Cytochrome Oxidase Mechanisms
- Bioinorganic Mechanisms: Reactions at Iron Clusters; NO and CO as Biological Signal Transducers
- Reactions of Nitric Oxide and Peroxynitrite
- Biological Implications of Nitric Oxide/Peroxynitrite

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**KALLIKREINS & KININS**  
HARBORTOWN RESORT  
VENTURA, CA

JANUARY 17 - 22, 1999  
Robert Colman, Chair  
François Almenc-Gelas, Vice-Chair  
<http://www.bnatural.com/grc/>

- Signal Transduction of Bradykinin Receptors
- Lessons from Knockouts of Tissue Kallikrein and Kinin Receptors
- Regulation of Kinin Receptors
- Molecular Basis of Kininogen Interaction with Cellular Receptors
- Kinins and the Cardiovascular System
- Plasma Kallikrein-Kininogen System and Bacterial Diseases
- Antiadhesive and Anticoagulant Functions of Contact System Proteins
- Kinins and the Central Nervous System
- New Horizons

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**LASER DIAGNOSTICS IN COMBUSTION**

IL CIOCCO  
BARGA, ITALY  
JUNE 20-25, 1999  
Katharina Kohse-Höinghaus, Chair  
Jay Jeffries, Vice-Chair  
<http://pc1.chemie.uni-bielefeld.de/gordon/>

- Linear vs. Non-Linear Diagnostics: General Developments
- Optical vs. Probe Techniques: PAH and Soot Diagnostics
- Picosecond Combustion Diagnostics: Applications of a New Tool
- Improving Combustion Chemistry: Diagnostics in Laminar Flames
- Active Combustion Control
- Diagnostics in Challenging Combustion Situations
- Diagnostics in Turbulent Combustion
- New Questions for Combustion Diagnostics
- New Approaches for Combustion Diagnostics

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**LIGAND RECOGNITION & MOLECULAR GATING**

HOLIDAY INN  
VENTURA, CA  
MARCH 7 - 12, 1999  
Thue W. Schwartz, Chair  
Diane M. Papazian, Vice-Chair

- Novel Aspects of Biophysical Approaches
- Forces and Principles in Ligand Recognition

- de novo Design and Recognition in Membrane Proteins
- New 3D Structures of Membrane Proteins
- Protein-Protein Interactions in the Membrane
- Lipid-Protein Interactions - Functional Aspects
- Ion Channel Gating - Molecular Determinants
- Conformational Changes in Rhodopsin and other 7TM's
- Gating in  $\beta$ -Barrel Membrane Proteins
- Transporters - Recognition and Gating

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**MAGNESIUM IN BIOLOGICAL PROCESSES & MEDICINE**

HOLIDAY INN  
VENTURA, CA  
FEBRUARY 7 - 12, 1999  
John A. S. McGuigan, Chair  
Klaus Beyenbach, Vice-Chair

- Chemistry of Magnesium and Analysis of the Ionized Form
- Cellular Magnesium: Intracellular Homeostasis and Membrane Transport
- Extracellular Magnesium: Renal and Magnesium Homeostasis in Extracellular Fluids
- Magnesium Transport and Intracellular Transduction
- Neuroscience of Magnesium: Basic and Clinical Aspects
- Mechanisms for the Actions of Magnesium in Cardiovascular Disease
- Magnesium, Catecholamines and Stress
- Intracellular Actions of Magnesium
- Chronic Latent Magnesium Deficiency: Fact or Fiction

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**MAMMALIAN DNA REPAIR**

DOUBLETREE HOTEL  
VENTURA, CA  
FEBRUARY 7 - 12, 1999  
Philip C. Hanawalt, Chair  
Samuel H. Wilson, Vice-Chair

- Special Lectures:
  1. History, Basic Research and Variation in DNA Repair Among Individuals
  2. Energy Transfer Along the DNA Helix
  3. Evolution and Critical Lesions in DNA Repair
- Repair of Endogenous Damage in Nuclei and Mitochondria
- Translesion Synthesis and Repair of Mismatches
- DNA Repair Enzyme Structure and Substrate Interactions
- Nucleotide Excision Repair: Role of Transcription
- Base Excision Repair: Subpathways and Overlap with Other Pathways
- Inducible Responses and Cell Cycle Checkpoints
- Cellular Localization of Repair and Effects of Bound Proteins
- DNA Repair Deficiency in Human Genetic Disease

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**METALS IN BIOLOGY**

HARBORTOWN RESORT  
VENTURA, CA  
JANUARY 24 - 29, 1999  
Eckard Munck, Chair  
Vincent Pecoraro, Vice-Chair

- Evolutionary Aspects
- Emergence of Life
- Ni and Fe Hydrogenases
- Photosystem II
- Valence Delocalization and Electron Transfer
- Cu Enzymes
- Zn and Fe Regulation and Uptake Ribozymes
- 'Green' Oxidants

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**MODERN DEVELOPMENTS IN THERMODYNAMICS**

IL CIOCCO  
BARGA, ITALY  
APRIL 18 - 23, 1999  
Bjarne Andresen, Chair  
R. Stephen Berry, Vice-Chair

- Exergy Analysis Today and Tomorrow
- Engineering Design
- Thermodynamics of Complexity
- Thermodynamics of Computation
- Thermodynamics of Phase Change and Phase Equilibrium in Small Systems
- Thermodynamic Optimization in Naturally Organized Systems
- Quantum statistical Mechanics and Surface Kinetics
- Thermodynamics in Economics

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**MOLECULAR PHARMACOLOGY**

HOLIDAY INN  
VENTURA, CA  
FEBRUARY 14 - 18, 1999  
Joan Heller-Brown, Chair  
Brian Kobilka, Vice-Chair

- G Protein-Coupled Receptors I, II
- Receptor Trafficking
- Heterotrimeric G Proteins and RGS Function
- Subcellular Localization of Signaling Molecules
- Small G Proteins, Growth and Cytoskeleton Development

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**NITRIC OXIDE IN BIOCHEMISTRY AND BIOLOGY**

HARBORTOWN RESORT  
VENTURA, CA  
FEBRUARY 7 - 12, 1999  
Owen W. Griffith, Chair  
Joseph S. Beckman, Vice-Chair

- Chemistry and Biology of Nitric Oxide: Overviews
- Biological Chemistry of Nitric Oxide
- Biological Targets of Nitric Oxide
- Structure of Nitric Oxide Synthase
- Enzymology of Nitric Oxide Synthase
- Nitrosylated Hemoglobin
- Nitric Oxide Toxicity and Defenses
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- Model Systems: What They Can Tell Us
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- Closing the Gap in Signal Transduction from Stress Perception to Response
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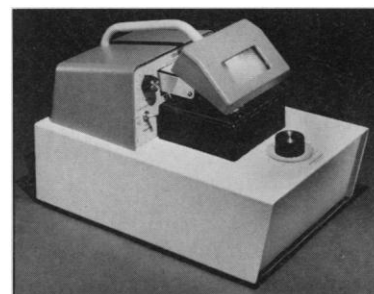
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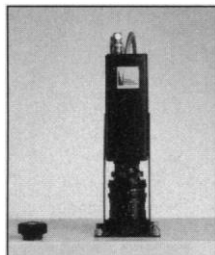
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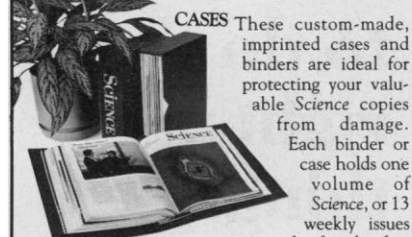
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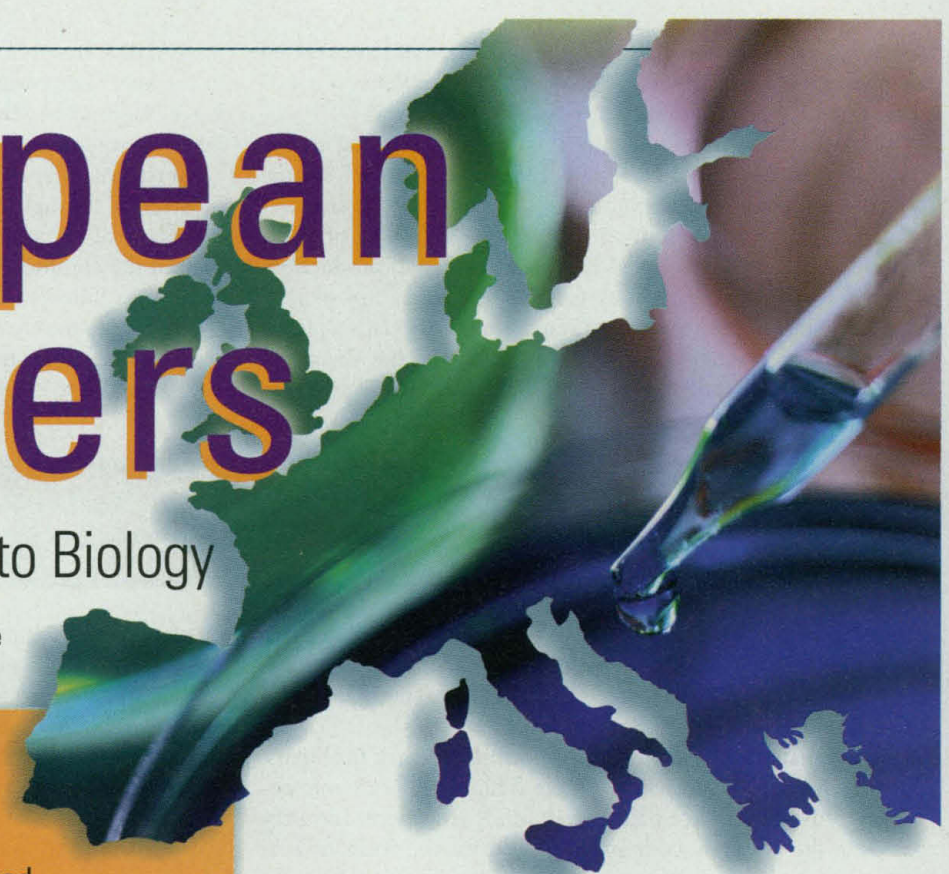
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# European Careers



Europe Gets Down to Biology Business by Peter Gwynne

Overcoming decades, if not centuries, of mutual suspicion, academic life scientists in Europe have started to talk to their industrialist counterparts. Often enough, those conversations have convinced the academics to join their erstwhile rivals. The result: an explosion of small start-up companies specializing in life science, on a scale never before known in Europe. Today, Europe boasts more than 1,000 entrepreneurial life science companies, which employ almost 40,000 people. In Germany alone more than 200 such firms have started up within the past two years.

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“It is no longer sufficient to suggest that Europe, and continental Europe in particular, is playing catch up,” states European Life Science 98, the fifth annual report on the European entrepreneurial life sciences industry, published by consulting company Ernst & Young. “The momentum of the past few years has underpinned a continental shift where the distance between Europe and North America is beginning to close.”

Included in the report, a survey of top executives in almost 300 European life science companies reveals promising career prospects for young life scientists. Four out of five CEOs expect to hire a significant number of employees in the next two years. Since almost three-quarters of the life science companies in Europe have fewer than 50 employees, those expectations appear extremely realistic.

The surge of start-ups has focused largely on biotechnology in all its manifestations. The European movement to industrialize biotechnology started in the United Kingdom, and British companies still lead European industry. Within the past two years, however, Germany has started to become a significant force in

*Peter Gwynne writes on a wide range of scientific and technological topics.*

**Continued ➤**



commercializing biotechnology. Other nations that have created an environment for entrepreneurship include the Benelux countries, France, Scandinavian countries, and Switzerland.

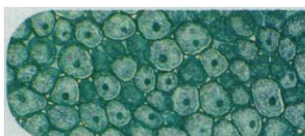
The activity is already paying dividends. According to the British Department of Trade and Industry, industrial sectors that use biotechnology account for 17 percent of all employment in the European Union, as well as 9 percent of gross added value and 20 percent of European industrial production.

Insiders see several reasons for the rapid creation of new biotechnology companies. For a start, the traditional suspicion between academic and industrial life scientists has dwindled significantly in recent years. Not only do the two no longer

ry (EMBL), based in Heidelberg, Germany, and Biotechnology in Europe, Manpower, Education and Training (BEMET), at the UK's Nottingham Trent University, also help to stimulate links between academia and industry.

Germany offers particular encouragement to commercial bioscience through its BioRegio initiative. Started in 1995, it has the goal of encouraging German regions to act hospitably toward the commercialization of bioscience. Other EU nations have since followed Germany's lead.

What does the creation of new companies mean in terms of careers for life scientists? It has helped recent graduates, post-graduates, and other job seekers to focus on key areas of opportunity.



**In the past two years, international venture capitalists have shown increasing interest in European biotechnology. Large pharmaceutical companies are also providing ready cash.**

avoid talking to each other, they have taken positive steps to work together on projects. Individual academic departments are even asking industrialists' advice on the type of training they should give their students.

Such collaborations stem in part from budgetary problems. As governments have reduced their funding of academic research, universities have had to seek funds elsewhere. Industry has both the available cash and the need for the fruits of academic research. Reductions in government funding for academic R&D have also caused some academic life scientists to fear for their jobs. Industrial scientists have experienced the same fears, as a result of mega-mergers among the large pharmaceutical companies. Medium-sized companies, in particular, are being squeezed between the large pharmaceutical companies that are growing even larger by acquisitions and the smaller, nimbler biotechnology companies.

Several scientists have responded by starting up their own firms. In doing so, they have benefited from the availability of capital for creating companies. In particular, entrepreneurially minded scientists at major pharmaceutical companies are setting out on their own, with the assurance of collaborative research agreements from their original employers. According to Ernst & Young, "the proportion of drug development candidates in the pipeline which are not invented in-house is growing. Big pharma is now willing to spend up to 30 percent of its research budgets on outside collaborations."

Three main sources of financing exist for start-up companies. In the past two years, international venture capitalists have shown increasing interest in European biotechnology. Large pharmaceutical companies are also providing ready cash. Novartis, for example, the company formed by the merger between Ciba and Sandoz, established a venture fund that helped several former employees of the two corporations to start up life science companies. And political bodies at various levels, from the European Union down to individual regions, are providing grants that help new companies to get off the ground. International organizations such as the European Molecular Biology Laborato-

Since small biotechnology companies have started to fulfill a middle role between large pharmaceutical corporations and academic departments, they frequently hire academics who can comfortably talk with their peers who have remained in the ivory tower.

Where is the action? General biotechnology is reemerging as a hot topic, after a few years of lower significance. Genomics of all types, and notably functional genomics, have huge potential, according to industrial biotechnologists. Bioinformatics is a hot area, and one that has far more open positions than qualified personnel. Combinatorial chemistry has strong appeal for the pharmaceuticals business. And immunology continues to show great promise.

Recruiters emphasize the need for training in molecular biology. They also point out the desirability, to potential employers, of postdoctoral students with a few published papers. Increasingly, European life scientists who have moved to the United States for postdoctoral training are returning to Europe rather than staying on in the United States as they used to. In the process, they are bringing to European companies American ideas for employee participation, such as stock options.

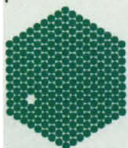


Reinhard Schneider

**HEIDELBERG, Germany:** "We're looking for biomathematicians, molecular biologists, sales people with scientific backgrounds, and a lot of technicians," says Reinhard Schneider, vice president, bioinformatics at LION bioscience AG. Founded in March 1997, Laboratories for the Investigation of Nucleotide Sequences (LION) is "an integrated genomics company with a strong focus on bioinformatics." Having started with 23 employees, the privately held company now employs 85 individuals. It hopes to double that number over the next two years. The company aims for an international flavor. "We have ten nationalities at LION," says Schneider. "We try to get them from

**Continued** ➤





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The European Molecular Biology Laboratory (EMBL), an international research organisation with its Headquarters Laboratory in Heidelberg (Germany), Outstations situated in Grenoble (France), Hamburg (Germany) and Hinxton (UK), and a Research Programme at Monterotondo (Italy) has the following vacancies in the headquarters laboratory in Heidelberg:

## TWO GROUP LEADER POSITIONS IN THE GENE EXPRESSION PROGRAMME (ref. 98/69)

The Programme seeks excellent candidates whose research is in the broad area of mechanisms of gene expression and their regulation. It is EMBL policy to encourage interdisciplinarity. We therefore also encourage applications from researchers whose work lies at the borders between Gene Expression and the topics of the other EMBL Programmes, namely Cell Biology and Biophysics, Structural Biology (incl. Biocomputing), Developmental Biology and Biochemical Instrumentation. If appropriate, an interdisciplinary group leader appointment between Gene Expression and one of these Programmes will be made. The Gene Expression Programme currently consists of seven groups whose research interests cover a wide variety of topics in gene expression. These include Genome engineering (Francis Stewart), Regulation of transcription in chromatin (Peter Becker), Molecular biology of the germline (Hans Schoeler), Structure and function of U snRNPs (Bertrand Séraphin), Cytoplasmic gene regulation and molecular medicine (Matthias Hentze), RNA processing and transport (Iain Mattaj) and Mechanisms of pre-mRNA splicing regulation (Juan Valcárcel).

Further information can be obtained from Iain Mattaj (mattaj@embl-heidelberg.de).

## GROUP LEADER IN THE DEVELOPMENTAL BIOLOGY PROGRAMME (ref. 98/59)

The Programme is interested in a broad range of developmental questions using a variety of model organisms and a wide range of methods. For this position we are open to applications in any field of developmental biology. However, we particularly encourage applications from qualified candidates working on important questions in mouse development. EMBL encourages interaction between groups with research interests in different disciplines. We encourage applications from people whose research would benefit from close ties with groups in the other Programmes of the laboratory, including Cell Biology and Biophysics, Gene Expression, Structural Biology (incl. Biocomputing) and Biochemical Instrumentation. Research interests of current group leaders in the Developmental Biology Programme include Neural development and axonal pathfinding in the mouse (Ruediger Klein), Signal transduction and oocyte maturation in *Xenopus* (Angel Nebreda), Structure function relationships in signal transduction (Giulio Superti-Furga), Signal-dependent transcription regulation (Dirk Bohmann), Control of cell migration in development of the *Drosophila* ovary (Pernille Rørth), RNA localization and cell polarity in development of the *Drosophila* germline (Anne Ephrussi), Cell signaling and polarity in *Drosophila* eye development (Marek Mlodzik), Genetics of eye development in fish (Jochen Wittbrodt), Cell signaling and axis formation in *Xenopus* (Tewis Bouwmeester), Limb development (Stephen Cohen).

Further information can be obtained from Stephen Cohen (cohen@embl-heidelberg.de; fax +49 6221 387 166).

## TWO GROUP LEADER POSITIONS in an INTERDISCIPLINARY INITIATIVE ON REGULATORY NETWORKS AND FUNCTIONAL GENOMICS (ref. 98/66)

This initiative will capitalize on the collaborative culture of the Laboratory, its emphasis on technology and instrumentation development, and its encouragement of research across boundaries of Programmes or disciplines. The initiative aims to promote quantitative modelling and experimental analysis of the behaviour of regulatory systems in living cells. It also aims to extend the global approach of genomics in a functional direction, with strong input from chemistry and physics. We have special interest in hiring:

- A chemist, interested in the development of novel approaches and probes to study macro-molecular processes in living cells, or in the assessment of genomic function in time and space. The primary affiliation of this appointment could be with any of the existing Programmes in Heidelberg.
- A physicist interested in the quantitative analysis of biological systems, by modelling and experimentation. This appointment will be in the Cell Biology and Biophysics Programme, which intends to develop a strong line of research in the fields of cellular morphogenesis and regulatory network analysis. Research interests of individual groups include the Generation and maturation of neuronal axons and dendrites (Carlos Dotti), Physical and molecular basis of microtubule-dependent cell morphogenesis (Eric Karsenti), Genetic analysis of *Drosophila* centrosome composition and functions (Cayetano González), Assembly of vaccinia virus and mechanism of phagosome-endosome fusion (Gareth Griffiths), Mechanisms of protein compartmentalisation along the exocytic pathway (Tommy Nilsson), Interaction between actin and membranes and its effects on actin assembly (Michael Way), Software and hardware development for biological instrumentation (Christian Boulton), as well as development of local probe techniques (Heinrich Hoerber) and new microscopes (Ernst Stelzer) and their use in cell biology. In addition, the Programme currently hosts the groups of Kai Simons (the generation and maintenance of surface polarity), Tony Hyman (spindle assembly, chromosome segregation and the generation of cell asymmetries) and Marino Zerial (molecular mechanisms involved in membrane trafficking), who will be starting a new Max Planck Institute in Dresden in 2000.

Further information can be obtained from Eric Karsenti (karsenti@embl-heidelberg.de; fax +49 6221 387 512).

Information about the research groups in these Programmes at EMBL-Heidelberg can be found on the EMBL web page ([www.embl-heidelberg.de](http://www.embl-heidelberg.de)).

Qualifications include postdoctoral experience and an excellent research record.

Closing date for applications for all positions: 20 November 1998

EMBL is an inclusive, equal opportunity organisation. By providing an exciting and stimulating research environment consisting of young, independent research groups, it also provides access to outstanding graduate students and postdocs. The laboratory provides financial help in relocating families and excellent child care is available.

Applicants should submit a curriculum vitae, quoting appropriate ref. no., with a concise description of research interests, and should arrange for three letters of recommendation to be sent to:

**The Head of Human Resources, EMBL, Postfach 10.2209, D-69012 Heidelberg, Germany. Fax: +49 6221 387555; email: [jobs@EMBL-Heidelberg.de](mailto:jobs@EMBL-Heidelberg.de)**





**According to the British Department of Trade and Industry, industrial sectors that use biotechnology account for 17 percent of all employment in the European Union ...**

everywhere, including the United States.” In fact, Schneider finds that Europeans who have spent part of their careers in the New World “come back with ideas from the U.S. To them, starting up a company is nothing strange.” LION also takes an international view of its business. It has a technology transfer agreement with the nearby EMBL, and very recently opened a subsidiary in Cambridge, UK.

Tracking down specialists in bioinformatics isn’t easy. “Large companies need specialists, but they can’t find them,” explains Schneider. “We train our bioinformatics people in-house; they learn by doing. Their background is very mixed. We have physicists, chemists, mathematicians, computer scientists, and, of course, biologists.” The company has started to undertake some training in the subject at local universities, with help from government laboratories and EMBL.

What does LION expect of applicants for employment? “It’s important that candidates fit our culture, and have the right background and communications skills,” Schneider continues. “I’m looking for people whose curricula vitae show that they are not single-minded. They should have plenty of work experience in different places, so that I can give them completely new problems in confidence that they will work on them.”

Schneider adds advice for new life science graduates seeking jobs. “Have the right education,” he suggests. “Be interdisciplinary. Try to find the company that fits your personal needs best.”



**ST JULIEN EN GENEVOIS, France:** In the year since he joined the Centre d’Immunologie Pierre Fabre (CIPF) from Glaxo Wellcome, general manager Jean-Yves Bonnefoy has increased the center’s staff by 25 percent. He has also doubled the number of Ph.D.’s undertaking research in the lab. The new employees have arrived to help the center “contribute to the success of the Pierre Fabre Group [which specializes in medicines and cosmetics] through the discovery, development, and production of biotechnological products to prevent and treat severe immune-mediated human diseases.”

The center has several links with academic laboratories. Indeed, says Bonnefoy, “I’m bombarded with proposals [for collaborative projects, from academics] almost every other week.” Several collaborative projects between CIPF and international academic laboratories focus on recombinant vaccines. The center is also working with the French government’s Centre National de la Recherche Scientifique and Institut National de la

Santé et de la Recherche Médicale to identify novel molecular targets and biotech projects.

The nature of the work demands expertise in science and medicine. “I’m still hiring people with either Ph.D. or M.D. degrees and postdoctoral experience,” adds Bonnefoy. “I often try to get people with double training. Individuals with M.D. and Ph.D. degrees are bringing value to my center right now.” Since the combination is rare in Europe, Bonnefoy frequently hires Europeans who have obtained both qualifications in the United States and want to return.

CIPF seeks high levels of qualification in all its hires. “I’m looking for people with very good backgrounds in infectious diseases and cancer,” says Bonnefoy. “They should already have good experience in molecular biology, biochemistry, or related subjects. I want more knowledge of biology than of technology.” Practical experience is also critical. “Being in a lab and seeing people interacting is important,” he explains. “You get a feel for what the work is by being there, and seeing if you have the fiber to do it.”

**SANDWICH, England:** Pfizer’s UK & European Central Research Division recruits new employees at all stages of their academic careers. “We look for school leavers, graduates, Ph.D.’s, and postdocs,” says Vincent Tuckwood, who heads the company’s University Sourcing and Selection Team. “At any of those stages, we believe that there’s nowhere outside the pharmaceutical industry that can train those people to be drug discoverers and developers.”

Pfizer works at several levels to guarantee the continuing flow of research that will lay the foundation for tomorrow’s medicinal advances. “We provide various scholarships, both internal and external, as well as tied and untied funds,” says Tuckwood. The company is also channeling money into collaborative research projects. Each year it invests about 25 percent of its discovery budget in small biotechnology companies and academic life science departments. “I think you’ll see the players in our industry increasing research funding across the board,” forecasts Tuckwood.

As for recruits, the company is seeking individuals willing to learn. “We don’t recruit people just for what they do day to day,” Tuckwood explains. “We recruit the whole person. We want the ability to learn as a key prerequisite. We’ll take quality scientists and train them to be medicinal scientists.” When interviewing potential recruits, he looks for “the sheer buzz of wanting to be in the lab and working on science.”

“The bottom line,” he adds, “is get good in science, and know what you want to achieve. Then ask us if we can help you to achieve it.” ■

# Opportunities Within A World Leading Biometrics Department

Pfizer Inc. is a research-based, global healthcare company. We discover and develop innovative value added products that enable millions of people around the world to enjoy longer, healthier and more productive lives.

There has never been a better time to join our highly respected Biometrics department. Pfizer has been voted the most admired company in the pharmaceutical industry by the independent publication 'Fortune'. Our product pipeline is increasing significantly and the growth of the company will be managed by developing the skills of existing and new staff not by company merger, (we have never felt the need to merge in our 150 history). Our Sandwich site already boasts one of the largest groups of Biometricians in the UK and the size of the department will almost double over the next few years offering superb career opportunities for you.

## Statisticians

(Ref: Genstat98/3)

If you looking for excellent career opportunities, new challenges and an attractive salary package, then come and join our expanding team.

Statisticians at Pfizer play a crucial role in the whole of our Clinical drug development programme right through from Phase I to Phase IV. In addition to being responsible for the design, analysis and reporting of data, you will be an integral part of a multidisciplinary project team and will collaborate closely with colleagues in the USA and Japan.

You may be interested in working in Exploratory development, where we evaluate new drug products in healthy volunteers and patients. You may be interested in working in the Full development area, where we take our products right through the larger scale clinical trials supporting regulatory filing. Maybe you want to work in specialist areas such as supporting population pharmacokinetics or pharmacokinetic/pharmacodynamic relationships, or genetic statistics. Or perhaps you wish to be responsible for taking a new drug product right through from Exploratory development to regulatory filing. Whatever your interests/aspirations, we have the career opportunity for you.

If you possess either a BSc or MSc in Statistics, together with at least 2 years' relevant experience, then we would like to hear from you.

## Clinical Data Management

(Ref: Gendm98/3)

We have numerous vacancies in our rapidly expanding Biometrics Department for dynamic and enthusiastic Clinical Data Managers.

Within our global, multi-disciplinary drug project teams, you will have the opportunity to expand your experience of working in Phase I, II and III clinical trials. Alternatively, you can join us in one of our specialist data management roles.

To work in this professional pharmaceutical environment, you will be a talented individual who influences the way that clinical trials data is collated and stored, through use of initiative and creativity. You will need to demonstrate the necessary drive and ability to handle a variety of tasks simultaneously within a fast moving environment.

You should be a graduate or similar, with experience in a pharmaceutical or related field, able to work within a team environment and with genuine enthusiasm and commitment to developing your career. Clear and effective communication skills are essential to this role.

We operate in a culture where contribution is recognised and rewarded. Professional and personal development is actively encouraged and fully supported. In addition to a secure, stimulating and rewarding career, we offer an excellent salary and benefits package which will reflect your skills, abilities and experience. Full relocation assistance to Sandwich, Kent, will be offered to those who wish to relocate to this desirable and affordable part of England.

If either of these positions are of interest to you and you are currently considering the next step in your career, then please feel free to contact us in complete confidence. We would be happy to arrange an informal discussion to answer any of your questions and tell you more about the many career opportunities within Pfizer Biometrics.

**Please forward a current CV, quoting the relevant reference number, to Ashley Miles, Senior Personnel Adviser, Pfizer Central Research, Ramsgate Road, Sandwich, Kent CT13 9NJ. Tel: +44 (0) 1304 643529 to arrange an informal discussion, or e-mail: ashley\_miles@sandwich.pfizer.com**

**Closing Date: 23rd October 1998.**

<http://www.pfizer.co.uk/recruit>



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# Bioinformatics

*Pharmacia & Upjohn is a global pharmaceutical company with research centers located in Sweden, Italy, and the U.S. Research activities are concentrated on Metabolic Diseases, Oncology, CNS, and Infectious Diseases.*

*The pharmaceutical industry is going through a paradigm shift concerning approaches to discover new drugs. The development of bioinformatics, genomics research, and applied information technology are central to this new paradigm.*

*Pharmacia & Upjohn is therefore strengthening the resources within these areas. We are committed to a strong research environment in Stockholm and have immediate openings for four new positions in the field of bioinformatics.*

## Bioinformatics Database Engineer

We are looking for a Bioinformatics Database Engineer to be responsible for expanding and supervising our infrastructure to handle the increasing flow of genomic data. In addition, he will also be responsible for maintaining database servers, and making data available to applications and research scientists. The primary responsibility also includes database integration and support to research scientists globally within Pharmacia & Upjohn.

*Qualifications:* Advanced degree in computer science or equivalent experience in database design, implementation and maintenance. Knowledge of available database resources for genomics, genetics, molecular biology and related areas. Familiar with algorithms used in the analysis of nucleotide and protein sequences.

## Bioinformatics Software Engineer

We are looking for a Bioinformatics Software Engineer or a Programmer with a background in computational

biology. The primary responsibility is to lead software development projects associated with applying algorithms developed in the public domain or within the company to automate the analysis and annotation of nucleotide and protein sequences. The successful candidate will also provide interactive and effective graphical user interface and presentation of data through Web-based programming.

*Qualifications:* Advanced degree or equivalent experience in the fields of computer science, molecular biology, or computational biology. Familiar with algorithms used in the analysis of sequences, the UNIX operating system, relational and object oriented databases. Experience in developing graphical applications, Java, and HTML.

## Bioinformatics Research Scientists

We are looking for two Bioinformatics Research Scientists to work in the area of Metabolic Diseases. We offer exciting opportunities for carrying out collaborative research within Pharmacia & Upjohn as well as with researchers at the Karolinska Center for Genomics Research. The scientists will provide

consulting services and general support in bioinformatics approaches as related to Metabolic Diseases.

Principal areas of interests include:

- Methods for analysis of metabolic and signalling pathways
- Sequence search and analysis, including algorithmic, statistical, and machine learning techniques
- Knowledge management, including advanced database technology and knowledge representation
- Mapping and genomics, including approaches to comparative genomics and genetic analysis
- Sequence/structure/function relationships, including novel prediction and classification methods

*Qualifications:* PhD in biological, computational, or physical science with relevant experience in bioinformatics research. Experience leading research activities is desirable.

For further information, please contact  
*Bo Skoog* (tel +46 8 695 85 78) or  
*Luis Parodi* (tel +46 8 695 77 59).

Please send your application (marked "Bioinformatics") by October 31st, 1998 to  
*Lotta Hansing*, Pharmacia & Upjohn AB, SE-11287 Stockholm, Sweden.



**Pharmacia  
& Upjohn**

## Clinical Pharmacokinetics

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for data analysis, interpretation and reporting in line with regulatory requirements, as well as communicating the overall results of your work both verbally and in writing. Enthusiastic and motivated you will be committed to your speciality and enjoy the varied interactions with a broad range of scientific professionals, both internal and external to the company.

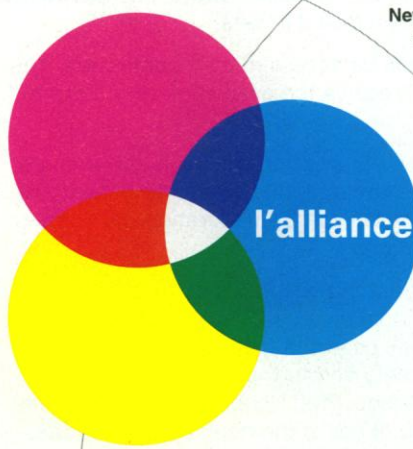
Ideally you will be a PhD scientist, preferably academically specialised in pharmacokinetics with a minimum of three years relevant post doctoral or equivalent experience gained in the pharmaceutical industry. Previous involvement in respiratory or anti-inflammatory projects would be advantageous as would experience of population kinetics.



To apply, please send your CV with a covering letter, including daytime telephone number and current salary details, to Harvey Nash plc, 13 Bruton Street, London W1X 7AH. Tel: 0171 333 0033. Fax: 0171 333 0032. Please quote reference number HC148S. You may also apply via [http://taps.com/Harvey\\_Nash](http://taps.com/Harvey_Nash)

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HEALTHCARE



New scientific discoveries are based on innovation, sharing knowledge and synergy of skills. This philosophy is a priority for the Institut de Recherche Jouveinal/Parke-Davis, one of the European Pharmaceutical Research Centres of PARKE-DAVIS located in the southern region of Paris. In our research centres, in Ann Arbor (USA), Cambridge (UK) and Fresnes (FR), scientists are working on a broad range of mechanistic approaches to discover and develop new drugs for important human diseases. Our present goal is to expand and build new teams in France, and work closely with our international teams. We are currently looking for :

**l'alliance ouvre les portes de la découverte**

**Post-Doctoral Fellows  
Molecular & Cell Biology**

2 postdoctoral positions are available in our Molecular and Cell Biology Department to work in the group of Dr Janet Allen on the signal transduction pathways activated by immune complexes which regulate macrophage activation.

The projects build from work showing that the high affinity IgG receptor switches signalling pathways in a differentiation dependent manner.

Positions require PhD in molecular and/or cell biology. One of them requires previous experience in cell biology, in particular cytosolic calcium measurements or imaging.

Innovation, strong communication skills and ability to work independently in a team environment are essential. ref. Sc/Po

For confidential consideration, please send your resume and your references, quoting reference, to Marie-Aude Julien, Institut de Recherche Jouveinal/Parke-Davis, Human Resources Department, 3/9 rue de la Loge, BP 100, 94265 Fresnes Cedex. France. Fax : (33.1) 40 96 77 32

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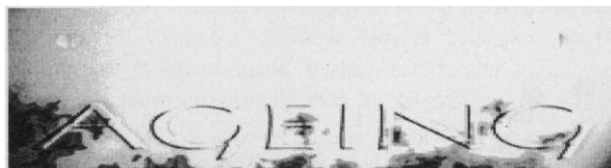


## International Conference on Ageing Studies and Lifetime Extension of Materials

12 - 14th July 1999

St. Catherine's College, Oxford, UK

Organised By: AWE/Hunting BRAE



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The meeting will address changes in the properties of materials in-service with time: methods of study, interpretation of data, theoretical modelling, lifetime prediction and extension.

A wide range of materials, including polymers, metals, glasses, ceramics, explosives, nuclear and structural materials, will be covered.

Session themes will include: observation and understanding of real time and accelerated ageing; experimental techniques; modelling and theoretical studies; lifetime prediction and validation; lifetime extension; material design for ageing.

This conference will bring together scientists and engineers from around the world who wish to understand material and system ageing processes and how they can be studied and predicted.

### Contributed papers and posters

Persons wishing to contribute either an oral or a poster presentation should send a one page abstract with a title, stating whether oral or poster, to the Organising Chairman at the address below.

### Abstract Deadline: 31st March 1999

For further information, contact (preferably by e-mail):

Dr. L.G. Mallinson  
International Conference on Ageing Studies and  
Lifetime Extension of Materials  
AWE Aldermaston  
Reading RG7 4PR  
United Kingdom

Telephone: +44 (0)118 9827993  
Fax: +44 (0)118 9824739  
E-mail: [lmallinson@awe.co.uk](mailto:lmallinson@awe.co.uk)

## Assistant/Associate Professor in Environmental Technology

In 1997 Odense University, Denmark, started a masters program in Environmental Engineering in cooperation with the Engineering College of Odense. The focus of the education is on solving environmental problems in relation to aquatic recipients and ground water. Important topics are currently: Reestablishments of wetlands for increased nutrient retention from drainage water and hydrodynamic modeling of water and nutrient transport in sewage systems, streams and estuaries. The applicant must have research experience in one of these topics and a Ph.D. in either Environmental Engineering, Hydrogeology, or similar. More information is available on web-site <http://www.ou.dk/adm/stillinger/>

Applicants who have completed their Ph.D. more than 5 years prior to appointment to the position will normally not be considered for the position as assistant professor. An applicant who feels that this 5-year rule should be disregarded on the basis of special circumstances must state this explicitly in the application.

The application must include the following: 1) A curriculum vitae including previous teaching experience; 2) A list of all publications, indicating which publications are most relevant for the position; 3) Copies of all relevant publications; 4) A list of all enclosures. All enclosures must be numbered, stated the applicant's name, and be assembled in sets.

Applications will be assessed by a committee. The applicants will receive the evaluation about themselves.

Appointment to the position will be in accordance with the salary agreement between the Ministry of Finance and the Danish Confederation of Professional Associations.

Information about the two institutions can be found on web-sites <http://www.ou.dk> and <http://www.iot.dk>. The position will be at the Institute of Biology, Odense University and further inquiries should be addressed to Assoc. Prof. Henning S. Jensen (e-mail: [hsj@biology.ou.dk](mailto:hsj@biology.ou.dk)) or to the head of the institute, Frank Bo Jensen (e-mail: [fjb@biology.ou.dk](mailto:fjb@biology.ou.dk)).

Please send 3 copies of the application, marked "Position No. 983025" to: **Odense Universitet, Det Naturvidenskabelige og Tekniske Fakultetssekretariat, Campusvej 55, DK-5230 Odense M, Denmark.**

**The closing date is 3 November 1998, 12:00.**



**Odense Universitet**  
Campusvej 55 • 5230 Odense M • Tlf. 66 15 86 00

**Free University of Berlin/Freie Universität Berlin  
Faculty of Veterinary Medicine**

together with the  
**Institute for Zoo Biology  
and Wildlife Research (IZW) Berlin**  
invite applications for the combined position of  
**Professor (Chair/C4)**  
of interdisciplinary Zoo Biology and Wildlife Science

and  
**Director**

**of the Institute for Zoo Biology and Wildlife Research**  
(to succeed Professor R. R. Hofmann)

**The appointee will be expected to take over**

1. The scientific leadership of the multidisciplinary Institute for Zoo Biology and Wildlife Research
2. Teaching and research in captive and free-ranging wildlife science. The appointee is required to teach at least one course (2hr/wk) per semester based upon the cooperation agreement.

The IZW is jointly financed by the Federal Government and the Land of Berlin. It is a statutory member of the Scientific Community Gottfried Wilhelm Leibniz. It mainly performs basic research in larger wild animals with special emphasis on 1. Nutritional adaptations, 2. Behavior in Space and Time, 3. Wildlife Diseases, 4. Evolutionary Genetics, 5. Fertility and Seasonality, and 6. Reproduction Management. For further information on IZW, visit its website: <http://izw.fmp-berlin.de/IZW>.

Both the Free University and the Institute are seeking a personality with an outstanding scientific record and teaching experience in the field of Zoo Biology and Wildlife Science.

Applicants are expected to have at least one higher degree "Habilitation" or equivalent. They should be experienced in science management, the acquisition of extramural research funding, and in international research collaboration.

Applications must contain a detailed CV, publication list, degree certificates (copies), and nominations of three academic referees. They should be sent within 8 weeks to **The Dean FB Veterinärmedizin, Freie Universität Berlin, Oertzenweg 19b, D-14163 Berlin, Federal Republic of Germany.**

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**Whom to contact**

Further information and application details can be obtained from:

**Roche MBA Fellowship Programme**  
c/o Roche Research Foundation  
CH-4070 Basel, Switzerland  
Telephone: +41-61-688 21 82  
FAX: +41-61-688 14 60  
E-mail: [research.foundation@roche.com](mailto:research.foundation@roche.com)  
URL: <http://www.mba-fellowship.org>



**Leicester  
University**

**DEPARTMENT OF CELL PHYSIOLOGY  
& PHARMACOLOGY**

**Postdoctoral  
Research Associate** (Ref: R7213/SC)  
**R&A1A £15,735 to £23,651 pa (lower end of scale)**

A three-year post funded by The Wellcome Trust is available immediately to study the pre-steady state kinetics of Na,K-ATPase. The successful candidate will have a PhD or equivalent in Biophysics/Chemistry/Physical Biochemistry and experience in at least one of the following: molecular enzymology, transport ATPases, enzyme or chemical kinetics and organic synthesis. The study will make use of quenched flow and a flow-kinetic method, and will involve some organic synthesis. Informal enquiries may be made to Dr J D Cavieres, telephone/fax: +44 (0) 116 252 3091 or email: [jdc7@le.ac.uk](mailto:jdc7@le.ac.uk).

*Application forms and further particulars are available, by quoting the reference, from the Personnel Office (Appointments), University of Leicester, University Road, Leicester LE1 7RH. Telephone: +44 (0) 116 252 2439. Closing date: 13 November 1998.*

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*Involved in research projects aiming at the discovery of novel drugs, you will manage a small team and be more particularly responsible for research program on hemodynamic technics and will perform in vivo models, specially in myocardial ischemia.*

*Qualifications include a PhD with post-doctoral experience of cardiovascular research. Applicants should have a practical experience of operative technics.*

*Our material and technical facilities are excellent. You will join a high-level multidisciplinary team and evolve in a stimulating scientific environment.*

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## MOLECULAR BIOLOGIST METABOLIC DISEASES

■ We have an immediate opening for a permanent position in molecular and cellular biology in the group of Metabolic Diseases. Candidates should have a Ph.D., or equivalent, with 2 or more years post-doctoral experience, preferably in the areas of arteriosclerosis, diabetes or lipid metabolism. Previous experience in the pharmaceutical or biotech sector would be advantageous. Fluency in English is required and competence in French desirable.

Responsibilities will include training and managing a small team of molecular biologists, including developing gene expression screening systems while interacting with on-going projects targeting transcriptional regulation.

The position is based in Dijon, a particularly attractive place to live in Burgundy.

Address your handwritten letter, quoting reference NH. BIO, accompanied by a CV and photo to : ■■■■■

Laboratoires FOURNIER, Human Resources,  
50 rue de Dijon, 21121 Daix, France.



**Max-Planck-Institute  
for Biochemistry**

(Martinsried/Munich, Germany)

## Junior Group Leader Positions

Applications are invited for autonomous group leader positions at the Max-Planck Institute for Biochemistry in Martinsried-Munich. On this campus, a new Department of Cell Biology will begin its activities in the fall of 1999. Its research will focus on:

### CELL CYCLE CONTROL

Areas of specialization include (but are not restricted to) mitosis, the centrosome cycle, and developmental aspects of cell cycle regulation. Applicants should have a doctoral degree and a strong research record. They should be able to direct a small research group and be interested in working in a highly interactive environment. Both biochemical and genetic approaches are welcome. Applicants experienced with mammalian organisms, *Xenopus laevis*, *Saccharomyces cerevisiae*, or *Caenorhabditis elegans* are particularly encouraged to apply.

The Max-Planck Institute for Biochemistry provides a superb research environment (for information, see <http://www.biochem.mpg.de>). Successful applicants will receive adequate laboratory space and core support, but will also be expected to apply for grants. Applications (including CV, list of publications, and addresses of 3 referees) should be sent to:

**Prof. Erich A. Nigg**  
Dept. of Molecular Biology  
Univ. of Geneva  
30, quai Ernest-Ansermet  
CH-1211 Geneva 4  
Switzerland  
Tel: +41 22 702 6127  
Fax: +41 22 702 6868  
[erich.nigg@molbio.unige.ch](mailto:erich.nigg@molbio.unige.ch)

### CALL FOR PROPOSALS

#### République Française

**The State of France and the Ile-de-France and Paris Region**  
are issuing a call for proposals for  
**four International Research Chairs to be called**  
**"Blaise PASCAL"**

Each Chair, for 12 months full time, possibly distributed over 2 years, is intended for a foreign scientist of high level in exact or natural science, in technology or environment, in social science or humanities, with a scientific project. It will allow the beneficiary to enjoy a cultural and scientific support, equipments, and functional means, in one or several centers for superior education or research, in Paris/Ile-de-France.

The total financial amount allocated to each project (including salaries) reaches 1,3 MF (around US\$ 208,000.00 social security contributions, taxes, subsistence allowance spending and administrative costs to be deducted\*).

The beneficiaries will have to teach about 10 lectures. A public seminar will conclude the project.

Proposals should **describe the scientific project, detailing its needs**, and should **indicate the accommodating establishment and its agreement**.

A multidisciplinary jury, associated with Institut de France, will select the candidates, according to the scientific interest of the project and the quality of the project file.

**Deadline: 31<sup>st</sup> of December 1998.**

Documents and information to the following address:

**Fondation de l'École normale supérieure**  
**Chaires Internationales de Recherche "Blaise PASCAL"**  
45 rue d'Ulm, F-75230 PARIS Cedex 05

(Information: W. Mercouroff, Ens, 33 (0) 1 44 32 31 85, Fax 33 (0) 1 44 32 31 83)  
e-mail: [wladimir.mercouroff@ens.fr](mailto:wladimir.mercouroff@ens.fr)

\*For information, social security contributions on salaries are about 80% of the net salary: the current VAT rate is 20.6%.



# Announcing the formation of the University of Rochester Institute of Biomedical Sciences

The University of Rochester Medical Center in Rochester, New York announces the formation of a new research institute, the University of Rochester Institute of Biomedical Sciences.

The Institute is the centerpiece of a 10-year, \$400 million strategic plan to expand the Medical Center's research programs in the basic sciences. The Institute will be headquartered in a new, 240,000 square foot building under construction on the Medical Center campus.

To complement the strengths of the Medical Center's existing faculty and programs, the Institute will be organized into six interdisciplinary research centers. More than 50 new faculty positions are being added, as well as post-doctoral positions. Generous start-up packages are available, including support for equipment, supplies, and personnel. Investigators will have tenure-track appointments in the Institute and cross-appointments in one or more departments in the School of Medicine and Dentistry. Candidates with proven abilities in research are invited to apply for openings in several areas.



## Call for Nominations and Applications

### *Center for Aging and Developmental Biology*

#### **Howard J. Federoff, M.D., Ph.D., Director**

Eight to ten assistant, associate or full professors. A group of diverse investigators will utilize different experimental paradigms to advance our understanding of basic neural mechanisms. These insights will be applied to problems affecting the development, maturation and dysfunction of the nervous system, with the long-term goal of developing effective therapies for neurological dysfunction associated with both disease and normative aging.

### *Center for Cardiovascular Research*

#### **Bradford C. Berk, M.D., Ph.D., Director**

Six to eight assistant, associate or full professors to build upon existing programs in cardiology, pharmacology, physiology, vascular medicine, thrombosis and microcirculation. Research programs include analysis of signal transduction in the vasculature, molecular genetic approaches to disease, integrative physiology with transgenic animals, and use of gene transfer technology to study disease pathogenesis and prevention.

### *Center for Oral Biology*

#### **Lawrence A. Tabak, D.D.S., Ph.D., Director**

Eight to ten post-doctoral positions available to join multidisciplinary teams investigating craniofacial development (cell surface glycoproteins in *C. elegans*; function of *Notch* signaling pathway in mouse); exocrine glands (neurotransmitter regulation of cell function and differentiation; molecular physiology of anion channel proteins); glycobiology (streptococcal glucosyltransferases; biosynthesis and function of mucin-glycoproteins); and infectious disease (adaptation of oral streptococci to low pH; effects of environmental stimuli on expression of virulence genes in oral bacteria).

### *Center for Vaccine Biology and Immunology*

#### **Tim Mosmann, Ph.D., Director**

*The Center will have a strongly interactive environment and will focus on basic research in immunology that will contribute to the understanding and design of vaccines.* Positions are immediately available for eight to ten assistant, associate or full professors, as well as post-doctoral fellows. Effective vaccines are still required for several major diseases, such as tuberculosis, malaria and AIDS. Modern advances in immunology also open up the possibility of developing vaccines against allergy, autoimmunity and cancer.

**Applications:** Applicants should send a curriculum vita, a statement of research interests, and the names of three referees to the attention of the appropriate Center Director at:

The University of Rochester Institute of Biomedical Sciences  
Office of Candidate Coordination  
601 Elmwood Avenue, Box 706  
Rochester, NY 14642

[www.urmc.rochester.edu/ribs](http://www.urmc.rochester.edu/ribs)



*Amgen has developed a research environment that emphasizes collaboration, intellectual honesty, scientific integrity, and a supportive culture. This unique approach has helped us grow into a global biotechnology leader in just eighteen years.*

*Every day, we solve another mystery of science.*

*And take another step toward*

**discovery.**

At Amgen, your accomplishments are rewarded. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center and three weeks' vacation. For immediate consideration, please mail your resume on plain white paper (indicating appropriate Job Code, using standard type and fonts, no bullets, italics, underlining or bolding), to: **Amgen, Staffing, Attn: LD, P.O. Box 2569, Thousand Oaks, CA 91319-2569**, or e-mail your ASCII text resume, to: **LDosch@amgen.com**. Please consult our Web site at **www.amgen.com** for information on other career opportunities available at Amgen. Principals only, please. We recognize that diverse perspectives are a key factor in the process of discovery. EEO/AA Employer M/F/D/V.



**www.amgen.com**

### **Research Scientist**

(Job Code: 0000000114)

The candidate we seek will have a strong background and publication record in the use of in vivo models to quantitate efficacy of immune modulators, cytotoxic chemicals, or angiogenesis inhibitors on tumor growth and metastases. Successful candidates for this position will have a demonstrated ability to extrapolate in vitro results to in vivo models of antitumor efficacy. Must have excellent verbal and written communication skills. A Ph.D. in Immunology, Pharmacology or related field and 3+ years' postdoctoral anticancer research are required.

### **Associate Scientist/ Research Scientist**

(Job Code: 0000000115)

Amgen is seeking Scientists to work in the Analytical and Formulation Process Development and the Cellular Process Development groups. The candidates who are interested in the Cellular division will be responsible for the development of large scale mammalian cell recombinant protein processes. A solid background in cell biology is critical to this job. Experience with bioreactors and/or cell culture media development is a plus. Candidates will possess a Ph.D. in Biology, Biotechnology or related area. 0-3 years' postdoctoral experience, or an MS degree, plus 7-10 years' biotechnology experience.

Candidates who are interested in working with the Analytical and Formulation Process Development group will be responsible for a range of duties. These consist of the determination of physical properties of microbial and mammalian cell process components and recombinant proteins ranging from crude preparations to final bulk purified materials. Candidates should have experience or knowledge in assay development, biophysical analytical methodology and molecular spectroscopy such as FTIR and laser light scattering. Protein biochemical experience is desired. A BS/MS/Ph.D. in Chemistry or Physics and at least 3+ years' in an analytical laboratory are required.

### **Research Associates**

(Job Code: 0000000116)

We are looking for experienced molecular biologists to join a new team that is focused on the discovery and evaluation of therapeutic target candidates using cutting-edge, high-throughput technologies. Successful candidates will have solid technical expertise in nucleic acid hybridization, probe preparation, PCR methods, DNA and RNA preparation, cDNA library construction and screening, tissue culture and mammalian DNA transfection, as well as a sophisticated

understanding of the theoretical basis behind these techniques. These positions require a BS/MS degree and 2-5 years' work experience, gained preferably in the biotechnology or pharmaceutical industry. Some exposure to applied high-throughput biology, such as gene expression analysis using DNA microarrays, expression cloning or drug screening would be a plus.

### **Packaging Development Engineer/Associate**

(Job Code: 0000000117)

This engineer will be responsible for developing packaging configurations for Amgen's intermediate and final products. The candidate will make design decisions based upon product/component compatibility, product protection requirements, marketing needs, manufacturing considerations, storage temperature, total cost and distribution requirements. 2-4 years' experience in package development, engineering, process development, or a related field is required. Experience in developing/writing specifications, reviewing drawings and a basic understanding of change control as it relates to specifications and bill of materials, is strongly preferred. A 4 year technical degree in Packaging Engineering, Mechanical Engineering, Chemistry, Biotechnology or equivalent is required.

### **Process Development Engineer**

(Job Code: 0000000118)

In this team-oriented position, you will be responsible for working on projects in the Formulation and Delivery Process Development department, performing and providing technical support for the scale-up of tablet (oral solid dose forms) production. Duties include collaborating with the Pharmaceuticals department, providing technical support, assisting in the troubleshooting of clinical and commercial tableting processes, reviewing manufacturing protocols and process deviations (incidents), conducting experiments at laboratory scale and pilot-plant scale, designing and scaling-up of experiments, analyzing data, writing reports, and auditing of potential contract facilities. The successful candidate must demonstrate excellent knowledge with unit operations related to tableting activities and be familiar with cGMPs. Previous experience in tablet characterization techniques and process validation, as well as a demonstrated ability to work in a collaborative team environment are required. Must be willing to travel up to 40% of work time. Your skill set should include knowledge or experience with the following: solids handling and tablet production operations such as milling, drying, compound-

ing, blending, compression, and encapsulation/coating and the ability to problem-solve and troubleshoot mechanical equipment and processes. You will have a BS or MS degree in either Pharmaceuticals, Chemical Engineering or related field with 5+ years' experience in the area of pharmaceutical tableting operations.

### **Process Development Associates/Engineers**

(Job Code: 0000000119)

The purification process development team is responsible for designing and implementing purification processes for bench, pilot and production scale recovery of recombinant therapeutic proteins. As an integral team member, you will interact extensively with staff from Research, Fermentation, Formulation, Process Engineering, Manufacturing and Regulatory. A thorough understanding of protein chemistry and purification is essential. In-depth knowledge of clarification, column chromatography, ultrafiltration, protein refolding and other recovery unit operations also required. Practice with large-scale GMP purification operations and experience increasing the scale of manufacturing purification operations are desirable. Candidates must be familiar with developing and using analytical methods for quantifying proteins and impurities as well as monitoring protein activity and stability. A Bachelor's degree in Biology, Chemistry, Chemical Engineering or related field and 3+ years' related industry experience in pharmaceuticals or biotechnology are required.

### **Process Development Associates Small Molecule Process Development**

(Job Code: 0000000120)

Opportunities are available in process development involving the design and implementation of chemical synthesis and recovery processes for bench, pilot and production scale recovery of small molecule active pharmaceutical ingredients. The successful candidate will work as part of a team, interacting extensively with staff from Research, Formulation, Process Engineering, Manufacturing and Regulatory. The candidate will also provide support for internal and contract manufacturing operations. A thorough understanding of process organic chemistry is essential. Scale-up experience and hands-on familiarity with GMP requirements are expected. A Bachelor's degree in Organic Chemistry, Engineering or a related field and 3+ years' related industry experience in pharmaceuticals or biotechnology are required. An MS degree in Organic Chemistry is preferred.

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Discover the extraordinary benefits of living in one of the nation's most vibrant metro areas. See for yourself why the Triangle was ranked the 5th best city in the country by Fortune magazine for working and raising a family. And why Novartis is number one in the world for careers in the life sciences.



## Scientific Careers Come Full Circle in the Triangle.

Novartis is a world leader in life sciences with prominent positions in Crop Protection, Seeds, and Animal Health. Our resources and experience enable us to continually develop new chemistries and technologies to create and improve environmentally responsible herbicides, insecticides, and fungicides.

This is your chance to make a significant contribution to world agriculture in our casual dress, 250 person, state-of-the-art biotechnology facility located in Research Triangle Park, NC.

### Plant Transformation Specialist Position #9859

The successful candidate will be an important part of a team working on crop transformation, and will work closely with the team leader to develop novel selection regimes for agrobacterium-mediated transformation systems in monocots. Key responsibilities will include improving crop transformation efficiency and generating transgenic events.

To qualify, you should have a Bachelor's degree with 2-8 years of experience or a Master's degree with 0-5 years of experience in plant tissue culture and plant transformation. You must also have solid experience in Agrobacterium-mediated transformation techniques. Skills in experiment design and data analysis are desirable. Knowledge of herbicide science and molecular biology is helpful.

### Plant Molecular Biologist Position #9837

In this role, you will work independently as a plant molecular biologist to isolate genes and corresponding cDNAs from insertional mutants of plants. Key responsibilities will include analyzing DNA sequences with computer programs, determining functions of predicted gene products, and assessing the feasibility of development assays.

To qualify, you must have a bachelor's or master's degree in the biological sciences and 5 years of molecular biologist experience including extensive experience with genomic DNA and cDNA isolation. You must also have experience with computer and web-based programs for the analysis of DNA sequence (i.e. Sequencher, GCG, Entrez, BLAST). The ability to design strategies for cloning, sequencing and analyzing complex DNA fragments is essential. A sound understanding of genetics, plant physiology and biochemistry would be desirable.

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 to: [novartisbiotech@recruitmentsolutions.com](mailto:novartisbiotech@recruitmentsolutions.com) Indicate the Position #\_\_\_\_-SM-BR1 in the subject area. To ensure that your information is uploaded into our HR System, please do not send your resume and cover letter as attachments.

For more information about Novartis visit our website: [www.cp.us.novartis.com](http://www.cp.us.novartis.com)  
We are an Equal Opportunity Employer M/F/D/V.

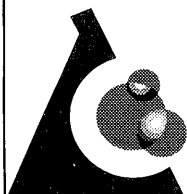
## SCIENTIST - Enzymology

*South San Francisco, CA*

**Axys Pharmaceuticals** is a leader in the integration of drug discovery technologies from gene identification through clinical development. We are focused on the discovery of small molecule therapeutics, and currently have several promising research collaborations with world-class pharmaceutical companies in a broad range of therapeutic areas, including respiratory, cardiovascular, metabolic, and infectious disease, oncology and central nervous system disorders. We currently have a great opportunity for hands-on scientist to join our expanding R&D team.

You will design/perform experiments characterizing lead compounds in a variety of enzyme systems; develop assays; characterize target proteases; represent the enzymology department on project teams; provide scientific leadership to enzymology research associates; and conduct research to identify new targets. The position requires a Ph.D. in biochemistry or related field; 2+ years of postdoctoral experience with a proven publication record; a solid background in enzyme kinetics & assay development; and strong written/verbal communication skills. Experience with molecular cloning, protein purification techniques, and physical biochemistry techniques helpful. Protease biochemistry & biology experience desired.

We offer an extremely competitive salary, full benefits, and career advancement opportunities within a progressive, growing company. For consideration, please forward your resume to: **Axys Pharmaceuticals, Attn: Job# N98-145-SCI, HR Department, 180 Kimball Way, South San Francisco, CA 94080; email: [human\\_resources@axyspharm.com](mailto:human_resources@axyspharm.com). EOE**



**AXYS**

[www.axyspharm.com](http://www.axyspharm.com)



**St. Jude Children's  
Research Hospital**  
ALBAC • Danny Thomas, Founder

## MICROBIAL PATHOGENESIS

### JUNIOR FACULTY POSITION

The Department of Infectious Diseases at St. Jude Children's Research Hospital invites applications for a tenure-track position at the Assistant Member level.

The successful candidate will demonstrate the ability to develop a program of research excellence that focuses on a significant problem in biology related to the pathogenesis of microbial disease. We are seeking a candidate who will pursue a multi-disciplinary approach to the problem and be willing to utilize the extensive resources available at St. Jude. This Department currently has Faculty members working on problems related to pneumococcal disease, tuberculosis, HIV and septic shock.

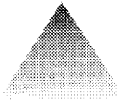
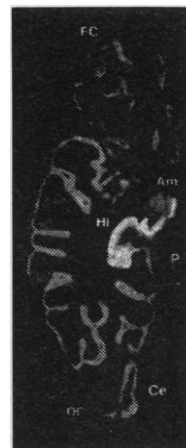
Applicants should include a curriculum vitae and statement of research interests and goals. Candidates should arrange to have three letters of recommendation forwarded to:

**Dr. Elaine Tuomanen**  
Chair, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
332 North Lauderdale St.  
Memphis, TN 38105

EOE

# CONQUER

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**medicine**



## *Challenging Opportunities for Molecular Scientists in CNS Drug Discovery*

As one of five R&D companies within the Astra Group, Astra Arcus is focused on the discovery and development of drugs for the treatment of central nervous system diseases. To further expand our research activities, we are building a Boston-based, state-of-the-art research center for 250 staff to be completed in 2001.

*In the interim, we are able to offer several exciting opportunities within the Lead Discovery Department to work at our newly-renovated facility at the Massachusetts Biotechnology Park in Worcester.* These are exceptional opportunities for ambitious scientists who aspire to work with advanced technologies in a multidisciplinary environment. ▲

**Qualifications:** Principal Scientists should have a Ph.D. with three to five years of industry experience in a relevant field. Research Associates should have either a B.S. or an M.S. degree with two or more years of relevant experience. Preference will be given to candidates with training in neuroscience or medical research experience. Excellent organizational skills are required, as well as a demonstrated ability to work in a highly interactive team-oriented environment. ▲

We offer a highly competitive compensation/benefits plan and managed relocation assistance. Please specify position and forward your resume, including salary history and references to: **Human Resources, Job Code: \_\_\_\_\_, Astra Arcus USA, Inc., 3 Biotech, 1 Innovation Drive, Worcester, MA 01605; fax: (508) 421-3593; e-mail: jobs@arcus.us.astra.com.** Astra Arcus is an equal opportunity employer. ▲

**ASTRA**  
Astra Arcus USA  
ASTRA ARCUS

## LEAD DISCOVERY

We are building a new lead discovery department focusing exclusively on targets in the central nervous system (CNS), with a strong emphasis on design and implementation of miniaturized functional cell-based assays including real-time calcium sensing techniques. Our aim is to become a world leader in the discovery of novel compounds which modulate the activity of CNS targets in a therapeutically relevant manner, using state-of-the-art robotics and automation.

### Principal Scientist/Team Leader (Ph.D.)

The successful candidate(s) will work in a project-driven atmosphere with the responsibility to create and implement new assay designs relevant to CNS targets, playing a key role in establishing this new department. You should have a strong background and publication record in neuroscience, molecular/cell biology and pharmacology, as well as some knowledge of chemistry. Previous experience (minimum of 2-3 years) with fully automated liquid handling systems and workstations, as well as competency in performing cell-based fluorescent and luminescent-based assays in 96 and 384 well formats (i.e. FLIPR) is essential. Familiarity with the Semliki Forest Virus expression system and large scale cell culture or protein purification techniques would be an advantage. The candidate will be expected to have sophisticated skills in HTS data analysis, a clear understanding of the overall drug discovery process, and a strong interest in upcoming assay miniaturization technologies. **Job Code: SM-DH01**

### Senior Research Associate (B.S./M.S.)

This is an exciting opportunity to become part of a new department which will develop and implement advanced high throughput screening assays using multiple robotic configurations and assay readouts. Your background should be in biology (molecular/cell biology, pharmacology, or biochemistry), with significant experience in cell culture techniques and ELISA/cell-based/receptor-binding assays using 96 or 384 well microplate formats. Previous industry experience with high throughput screening, including data analysis and the programming, use, and maintenance of automated liquid handling systems, are desired. A major challenge will be the additional responsibility and organizational skills involved in establishing a new laboratory. You will work independently but must function effectively as a team player. In this rapidly advancing field, you are expected to be highly motivated and willing to continually develop new skills in the areas of assay development and automation. **Job Code: SM-DH02**

### HTS Data Management (2-5 years' industry experience)

This position will constitute a fundamental bridge between the departments of Lead Discovery (LD) and Information Systems & Technologies (IST), assuming primary responsibility for capture, analysis, and archiving of data generated by the high throughput screening group, as well as compound plate inventories. Using both ActivityBase and RS3 software packages, you will develop creative data calculation templates, often working with HTS assay formats generating multiple parameter readouts (i.e. test and normalization values) and in 384 well formats. Working with IST on both a local and global Astra level, you will generate searchable web interfaces for HTS data access and exchange. Familiarity with Oracle, ISIS, and interfaces to lab instrumentation, and a background in biology and/or chemistry is desired. This position requires good interpersonal and collaborative skills; it offers tremendous opportunity to influence the data structures in the newly established LD department, and to participate in initiatives to integrate experimental data on a global level. **Job Code: SM-DH03**

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## MASS SPECTROMETRIST

**SUMMARY:** Work as a senior member of the Mass Spectrometry Team in the Environmental Science & Waste Technology Group in advanced clean chemistry facility performing ultra-sensitive isotopic analysis by mass spectrometry. Responsible for oversight of the daily operations, ensuring low-level actinide element determination goals are met, and actively assisting with mass spectrometry program development and innovation. Candidate will be encouraged to pursue timely publication of research.

**REQUIRED SKILLS, KNOWLEDGE, ABILITIES:** Demonstrated excellence in the application and interpretation of an ultra-sensitive analytical technique. Ability to communicate effectively, both orally and through peer-reviewed publications, with a wide range of technical and non-technical clients. Ability to provide innovative solutions to environmental, geological, and/or nuclear safeguard challenges, as demonstrated by reports or publications. Ability to work both independently and in a team environment.

**DESIRED SKILLS, KNOWLEDGE, ABILITIES:** Experience managing and training personnel in an analytical facility. Prefer Thermal Ionization, Inductively Coupled Plasma, or ultra-sensitive gas mass spectrometry experience. Clean room use, design or operation experience, plus background in development of new instrumentation or analytical methods. Understanding of analytical instrumentation, e.g. electronics or mechanical or vacuum systems. Background in nuclear chemistry/physics, or nuclear safeguards.

**EDUCATION, TRAINING, OR LICENSING:** B.S., M.S., or Ph.D. degree in Science or Engineering, with 2+ years self-directed research or project management experience.

Ability to obtain a DOE Q-clearance, which normally requires U.S. citizenship, is required. Applicants selected will be subject to a Federal background investigation and must meet eligibility requirements for access to classified matter.

For consideration, please send your resume and publication list, referencing "Science 983981," to [jobs@lanl.gov](mailto:jobs@lanl.gov) (no attachments, please) or mail to: Human Resources Division, Los Alamos National Laboratory, "Science 983981," Mail Stop P286, Los Alamos, New Mexico 87545.

[www.lanl.gov](http://www.lanl.gov) EOE

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NATIONAL LABORATORY

Operated by the University of California  
for the Department of Energy

## Postdoctoral Positions

Joslin Diabetes Center/  
Harvard Medical School

### IMMUNOLOGY/ GENE THERAPY

Two postdoctoral positions are available for highly motivated individuals to join an NIH-funded laboratory. One position involves use of state-of-the-art gene therapy strategies to bioengineer surrogate beta cells for insulin replacement in diabetes. The second position is to conduct research on the basic mechanisms that initiate autoimmune diabetes utilizing transgenic/knockout mouse approaches. Candidates with a strong background in immunology, cell biology or biochemistry will be considered.

Please send CV, a summary of research interests, and three references to: Dr. Myra A. Lipes, E-mail: [lipesm@joslab.harvard.edu](mailto:lipesm@joslab.harvard.edu); FAX: (617) 732-2589.

### VASCULAR BIOLOGY

Postdoctoral position available immediately to study the regulation of angiotensin II signaling and action in the cardiovascular system in diabetes. Candidates should have a PhD or MD and experience in molecular or cellular biology.

Please send CV and the names, addresses and telephone numbers of three references to the attention of Dr. Edward P. Feener, Section on Vascular Biology; FAX (617) 732-2637; E-mail: [Feener@joslab.harvard.edu](mailto:Feener@joslab.harvard.edu).

Joslin Diabetes Center, One Joslin Place,  
Boston, MA 02215



**Joslin  
Diabetes Center**

An Affirmative Action/Equal Opportunity Employer

## ASSISTANT PROFESSOR

The School of Kinesiology of Simon Fraser University seeks a junior scientist to fill a tenure-track position at the level of Assistant Professor. The successful candidate will be expected to establish an independent, externally funded research program. We seek to appoint a person with expertise in one of the following areas:

### Area

Active Rehabilitation

OR

Behavioural Neuroscience

OR

Nutrition

### Examples of Courses Taught

Injury: Prevention and Rehabilitation  
Seminars in Active Rehabilitation

Physiology of Complex Behaviour  
Brain and Behaviour Laboratory

Human Nutrition: Current Issues  
Applied Human Nutrition

In all cases, there is an expectation that existing core courses be taught and new courses will be developed at the undergraduate and graduate levels by the successful applicant.

Simon Fraser University is renowned for the high quality of its programs. Tenure-track appointments are for an initial probationary period of five years and include an excellent benefits package, a mortgage assistance package, and a generous moving allowance.

The School of Kinesiology has the mission to study human structure and function and their relation to health and movement. Its 20 faculty members and five laboratory instructors cover a wide range of disciplines and teach approximately 500 students enrolled in the B.Sc. program in Kinesiology and 50 graduate students enrolled in M.Sc. or Ph.D. programs. Details may be found at: <http://fas.sfu.ca/kin>.

The intended start date is as soon as possible. Priority will be given to applications received by 2 November 1998, but additional applicants may be considered until the position is filled. To apply, please submit your curriculum vitae, three publications that you consider most important, a cover letter outlining your anticipated research directions and your philosophy and commitment to teaching, along with the names, addresses, and telephone numbers of three referees to: J. Dickinson, Ph.D., Director, School of Kinesiology, Faculty of Applied Sciences, Simon Fraser University, Burnaby, British Columbia, V5A 1S6, Canada.

Simon Fraser University is committed to the principle of equity in employment and offers equal employment opportunities to qualified applicants. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. All appointments are subject to budgetary authorization.

## Postdoctoral Fellow

The Eukaryotic Transcriptional Regulation Section, Molecular Basis of Carcinogenesis Laboratory (MBCL), is seeking postdoctoral fellows to study the role of C/EBP transcription factors in regulating gene expression and determining cellular phenotypes. Projects include: analysis of C/EBP protein function and expression *in vivo* using transgenic and gene targeting approaches; mechanisms of target promoter specificity; protein-protein interactions; and posttranslational regulation of C/EBP protein activity. Excellent core facilities for animal studies are available at NCI-FCRDC. Additional information about these projects, as well as publications, can be found at <http://nmrweb.ncifcrf.gov/abl/mbcl/johnson.html>. Candidates should have a strong background in molecular biology, biochemistry, or molecular genetics.

The ABL-Basic Research Program at the Frederick Cancer Research and Development Center is located in Frederick, MD (45 miles north of Washington, DC) and offers a full complement of benefits, competitive postdoctoral stipends, and an excellent work environment. To apply, please send a curriculum vitae, an introductory letter containing a brief description of research experience, and three letters of reference to:

Dr. Peter Johnson  
c/o Human Resources Dept.  
ABL-Basic Research Program  
NCI-FCRDC  
P.O. Box B, Bldg. 428,  
Frederick, MD 21702-1201



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Howard Hughes Medical Institute

# Predoctoral Fellowships in Biological Sciences

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## 1999 Competition

80 fellowships will be awarded by the Howard Hughes Medical Institute for study toward a Ph.D. or Sc.D. degree in the biological sciences listed below. Awards, based on an international competition, focus on research directed to understanding basic biological processes or disease mechanisms. Fellowships may be held at academic or research institutions with appropriate degree programs.

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## Fellowship Terms

- Full-time study toward the Ph.D. or Sc.D.
- Up to five years of support possible
- \$15,000 annual stipend
- \$15,000 annual cost-of-education allowance

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## Eligible Fields of Study

biochemistry	genetics	neuroscience
biophysics	immunology	pharmacology
biostatistics	mathematical and	physiology
cell biology	computational biology	structural biology
developmental biology	microbiology	virology
epidemiology	molecular biology	

---

## Eligibility

- Beginning graduate study (prior study toward an M.P.H. or a medical degree does not rule out eligibility)
  - college seniors
  - first year graduate students
  - medical students and physicians (M.D., D.O., D.D.S., or D.V.M.) not past the first year of a Ph.D. or Sc.D. degree program
- Not in a funded M.D./Ph.D. program
- No citizenship requirements for application; U.S. citizens may study abroad, but others must study in the United States

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## Schedule

Application deadline: November 10, 1998

Awards announced: early April 1999

Fellowships start: June 1999–January 2000

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## 1999 Program Announcements, Eligibility Guidelines, and Applications

Hughes Fellowship Program  
Fellowship Programs Unit  
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](mailto:infofell@nas.edu)  
<http://fellowships.nas.edu>

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.



### FACULTY OPENINGS

**THE EVERGREEN STATE COLLEGE** seeks broadly trained faculty interested in teaching in a public liberal arts institution emphasizing interdisciplinary study and team-teaching. "Regular" positions typically involve initial 3-year term contracts, rotation between specialized and general education courses, eligibility for permanent appointment after 3-6 years of full-time Evergreen teaching. All faculty help students develop effective writing. Review of completed applications will begin on dates indicated and continue until finalists are selected.

**Inorganic/Physical Chemistry (Regular).** Faculty member with strong commitment to undergraduate instruction to teach chemistry at a variety of levels and degrees of specialization in Evergreen's teaching environment. The science curriculum emphasizes computer instrumentation and undergraduate research, and a strong experimental interest by the candidate is preferred. Evergreen has modern GC, NMR, and spectroscopy and computer applications lab available for undergraduate teaching and research use. Teaching duties rotate to include majors, non-majors, and general education audiences. Candidates should have an interest in social, philosophical, or historical context of scientific research and an ability to collaborate with colleagues from other disciplines, including social sciences and humanities. **Limited to applicants with 1 to 12 years of experience.** Review of complete files starts October 30, 1998.

**Human Biology (Regular).** Versatile human biologist to teach a variety of interdisciplinary, team-taught programs from freshman to senior level and from broad to specialized in focus. The applicant should be prepared to develop thematically organized programs with a biological content, to collaborate with psychology and health policy faculty, and should have an interest and background in the cultural issues raised by human biological research. The field of study of the applicant may be any of several subspecialties including, but not limited to, immunology, endocrinology, or nutrition. A broad base of understanding of biology is important, as is a second field of interest, preferably outside of the sciences. Review of complete files starts November 23, 1998.

**Philosophy of Science (Regular).** Faculty member with strong undergraduate teaching interests to teach a variety of interdisciplinary, team-taught programs. The candidate must have an advanced degree in philosophy with significant background in mathematics and physics, chemistry, or laboratory biology. Duties will rotate year by year and include working closely with science faculty in delivering science content; developing and delivering material on issues in the philosophy of science and ethics; developing programs with both science and non-science faculty to familiarize students with the sciences and their philosophical, historical, ethical, and social context. Review of complete files starts November 23, 1998.

The College reserves the right to extend searches or not offer positions advertised. All positions are contingent on funding. Further information about Evergreen is available at <http://www.evergreen.edu>. Persons with disability can receive accommodations in the hiring process by contacting the Hiring Coordinator. For required application procedures, write **Faculty Hiring Coordinator, TESC, Olympia, WA 98505**; E-mail [blodgetd@elwha.evergreen.edu](mailto:blodgetd@elwha.evergreen.edu).

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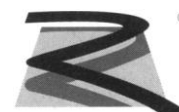
### LIFE SCIENCES ASSOCIATE

Applicants must have a Ph.D. in biological science with expertise in cell biology or molecular biology and industrial experience in product-oriented research and development. The position requires strong communication skills.

The associate will appraise technologies from universities and other institutions for utility and market value, oversee patent prosecution, work with the Venture Development Group to add value to early-stage technologies, identify commercial partners for technology development, design commercialization strategies to maximize the value of technologies, and negotiate licenses and other agreements.

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### GENOMICS TO ANTIBIOTICS— ENSURING A HEALTHY FUTURE

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#### Investigator/Senior Investigator

We are looking for an individual with a strong background in the design and implementation of novel in vitro assays for the evaluation of antimicrobial agents. The successful candidate will be responsible for the development of biochemical assays and genetically modified bacterial cell lines to enhance the antibacterial screening capabilities of the department. Additional experience in the implementation of automated systems is preferred.

To qualify, we require a PhD, preferably with 1-2 years of postdoctoral experience.

SmithKline Beecham offers a competitive benefits and compensation package, as well as a challenging work environment. Please forward your resume to: SmithKline Beecham Pharmaceuticals, Job Code: C8-02465, PO Box 40047, Philadelphia, PA 19106. Indicating Job Code is essential. We are an Equal Opportunity Employer, M/F/D/V.

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### ALBANY MEDICAL COLLEGE TENURE-TRACK FACULTY POSITIONS IN VASCULAR BIOLOGY

The interdisciplinary Vascular Biology Research Group at the Albany Medical College seeks applications for three tenure-track positions at the rank of Assistant Professor. Candidates should have demonstrated research productivity and the capability of establishing an independent nationally funded research program in a cardiovascular-related field. Highly qualified scientists with established extramurally funded research programs may also be considered at a higher rank. We seek individuals whose research is being carried out at the cellular and molecular levels to complement existing research strengths in vascular smooth muscle and endothelial cell biology and nitric oxide biology. Successful applicants will be appointed in an appropriate basic science department and will be expected to participate in teaching activities within the graduate program and medical school.

Organization and expansion of the Vascular Biology Research faculty are part of a larger Strategic Research Plan initiated in 1996 by the Albany Medical College Board of Directors to develop and promote biomedical research and graduate student training within four thematic areas. A generous start-up package, recently renovated research space, and access to Molecular Biology, Protein Chemistry, Flow Cytometry, and Imaging Core Facilities will be available to the successful applicant. Opportunities for collaboration with members of the Cell and Molecular Biology Theme, Molecular Basis of Disease Theme, and Neuropharmacology and Neuroscience Theme, and with scientists at the New York State Wadsworth Laboratories, SUNY Albany, and Rensselaer Polytechnic Institute provide a diverse and fertile research environment.

Applicants should send a letter of application indicating their research interests and plans, a curriculum vitae, and the names and addresses of three references by December 1, 1998 to:

**Dr. Harold A. Singer**  
Director, Vascular Biology Research Group  
Albany Medical College  
47 New Scotland Avenue (MC-8)  
Albany, NY 12208

An equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

# I N N O V A T I O N

... is "priority one" at Millennium.

Millennium is a leading drug discovery and development company employing large-scale genetics, genomics, high throughput screening and informatics in an integrated science and technology platform. In addition, we have several major pharmaceutical partners spanning numerous disease areas. Based on our success, we are expanding our disease focus into a number of additional areas including: cancer, pain, cardiovascular disease, hematology and virology.

We have a number of interesting opportunities which will involve gene identification, functional analysis and assay development. Candidates should have a Ph.D./MD with 3-5 years of postdoctoral experience, good oral and written communication skills, and an outstanding record of publication. Familiarity with molecular biological and anatomical techniques is a plus.

We are also looking for candidates with a BS/MS and 2-4 years of solid Molecular Biology experience including *in situ*, Immunohistochemistry, *in vivo* physiological monitoring, DNA cloning, and PCR. These are exciting opportunities to work at the interface of Genomics, Molecular Genetics and Drug Discovery.

## Oncology

Identify novel targets and assays for drug development which relate to mechanisms of cancer cell growth, metastasis, and chemoprevention.

## Pain

Study the molecular mechanisms of pain. Experience with animal models of hyperalgesia is required. Preference will be given to applicants with behavioral and electrophysiological recording techniques for peripheral and central neurons.

## Enzymology

Will involve characterization of small molecule, novel compounds (identified from cell-based screens) for which we are beginning to ascribe putative mechanisms of action. Requires breadth of practical and theoretical experience in establishing enzyme assay systems where the proteins themselves may only be poorly characterized. Ph.D. in Biochemistry is essential and a good background in Molecular Biology is desirable. Experience in assay development and protein purification, enzymology or biophysical characterization of protein: ligand interaction is required.

## Drug Discovery

Work in our assay development or high throughput screening groups to configure and operate high throughput screens for genes that are demonstrated to be validated targets for small molecule drug development. Qualifications include a BS/MS in Cell Biology, Immunology, or Biochemistry, and 2-4 years of experience to include work with such techniques as the generation of functional bioassays, ELISA-based assays, ligand identification and tissue culture.

## Angiogenesis

Identify novel targets and assays for drug development which relate to mechanisms of angiogenesis.

## Cardiovascular Disease

Cardiac ion channels and cell electrophysiology, endothelial biology as well as vascular smooth muscle biology.

## Virology

This group will identify, validate and develop novel mechanisms through which to prevent viral replication. Our primary interests are targeted toward Herpes Simplex Virus, Human Papillomavirus and Hepatitis C Virus. Experience in studying one or more of these pathogens at the molecular and cellular levels is necessary.

## Receptor Biology

Identify novel receptors and develop assays to analyze receptor binding and function, including reporter based systems. Interact with various disease groups to understand the role of these receptors in disease progression.

## Ion Channel Biology

Identify novel ion channels and develop assays to understand function.

## Fungal Molecular Biology

Utilize *S. cerevisiae* genetics, in conjunction with Millennium's technology platform, to accelerate the discovery and development of new antifungal agents. Requires Ph.D. and 4+ years' postdoctoral experience.

### All Positions Are For Our Cambridge Facilities

Enjoy the rewards of a collaborative environment, the challenge of progressive science, the incentive of stock ownership, opportunities for career growth and a generous compensation package.

Qualified candidates should send resumes in confidence, using one of the following: Please be sure to include Source Code SC1098 on all submissions. If including cover letter, please place/paste after resume.

- For fastest consideration, visit the "Careers" page of our website at [www.mlnm.com](http://www.mlnm.com) and apply on-line.
- Via e-mail at [millennium@webhire.com](mailto:millennium@webhire.com). Please reference Source Code on "Subject" line.
- Via toll-free fax at 1-800-370-6925. Please reference Source Code on the fax cover or page 1.
- Via mail: Millennium Pharmaceuticals, Inc., Resume Processing Center, Source CODE SC1098, PO Box 798, Burlington, MA 01803.



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SmithKline Beecham, a global leader in Research and Development, continues to pioneer innovative pharmaceuticals, healthcare products, and services. We are seeking individuals to join us at our state-of-the-art suburban Philadelphia facility.

### Data Mining for Drug Discovery

In the course of our work, new technologies for high throughput screening and high throughput synthesis have been increasing the volume of data relating molecular structure to biological activity by orders of magnitude. We have the following growth opportunity for an advanced professional to seek new knowledge in these data.

To expand our capability in processing and analyzing chemical and biological information in direct support of drug discovery research programs, you will apply methods for knowledge discovery in databases to find relationships within and among large chemical and biological databases. In addition, you will collaborate with scientists in other disciplines to identify targets of inquiry, as well as with computer and statistics specialists. You will also develop and maintain external collaborations to take advantage of newly developed methodology in pattern recognition and database mining.

We require an advanced degree (PhD preferred) in biological sciences, chemistry, computer science or statistics; or expertise and relevant experience equivalent to a PhD; experience in information analysis, pattern recognition, machine learning or chemometrics; excellent written and verbal communication skills, and sufficient depth of chemical and biological knowledge to communicate effectively with scientists in drug discovery programs; the ability to think critically and drive projects to completion; and scientific software experience in a Unix environment. (Job Code: H8-0302S)

### Investigator/Senior Investigator

From genomics to antibiotics, our Microbiology Research Department is ensuring a healthy future. We are looking for an individual with a strong background in the design and implementation of novel *in vitro* assays for the evaluation of antimicrobial agents. The successful candidate will be responsible for the development of biochemical assays and genetically modified bacterial cell lines to enhance the antibacterial screening capabilities of the department. Additional experience in the implementation of automated systems is preferred.

To qualify, we require a PhD, preferably with 1-2 years of postdoctoral experience. (Job Code: C8-0246S)

SmithKline Beecham offers a competitive compensation/benefits/relocation package. For confidential consideration, please send your resume and the names of three references to: SmithKline Beecham Pharmaceuticals, (Job Code), PO Box 40047, Philadelphia, PA 19106. Indicating Job Code is essential. We are an Equal Opportunity Employer, M/F/D/V.

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## Research Assistant Animal Health Infectious Disease

Pfizer is involved in some of the most critical research in the world today. As a Fortune 100 company, we have established a product pipeline that is unparalleled, and an intellectual, collaborative environment that inspires achievement. Join us and become a part of the cure.

Located on the shores of historic Groton, CT, Pfizer offers a high quality of life in close proximity to New York City, Providence and Boston. We offer very competitive salaries and excellent benefits as well as generous relocation assistance. For confidential consideration, please forward resume to: **Employee Resources, Pfizer Inc., Job Code #2832, Central Research Division, Eastern Point Road, Groton, CT 06340. For more information about Pfizer, see us on the Internet at: <http://www.pfizer.com>.** We are an equal opportunity employer M/F/D/V.

In this position, you will join a multidisciplinary team to discover novel antibacterial agents for livestock and companion animals. Responsibilities include development and running screens for novel targets identified with bacterial genetic, biochemical and molecular biological techniques; and development of molecular diagnostic system for the characterization of antibiotic resistance of field and clinical isolates. The successful candidate should have an MS or equivalent education and experience in bacteriology/microbiology field. Several years industrial experience is desirable. Candidate should demonstrate strong bacterial genetics (especially *E.coli*/Salmonella) and biochemical research experience as well as modern molecular biological techniques.



*We're part of the cure.*

### FACULTY POSITIONS - MOLECULAR GENETICS THE OHIO STATE UNIVERSITY

The Department of Molecular Genetics at The Ohio State University is initiating a search for three tenure-track faculty members 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 as well as the application of these approaches to cancer and other diseases. 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. 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 in which to live and work. Information about our Department and University can be obtained by contacting our web site: <http://www.biosci.ohio-state.edu/~molgen/molgen.html>.

Applications should include a detailed curriculum vitae, a description of research experience, and 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 applications will begin during December 1998. Application materials should be sent to:

**Faculty Search Committee, Department of Molecular Genetics, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210.**

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## EXCITING CAREER OPPORTUNITIES IN BIOMEDICAL RESEARCH ADMINISTRATION



The Congressionally Directed Medical Research Programs (CDMRP) office in Frederick, Maryland is seeking qualified, energetic candidates for several biomedical research administration positions. The CDMRP is a subordinate research area within the United States Army Medical Research and Materiel Command responsible for administering targeted Congressional appropriations relating to breast, prostate, and ovarian cancer, and neurofibromatosis. The Program office is currently managing approximately 1,600 grants and contracts representing a collective research portfolio of over one billion dollars.

**Qualifications:** All positions require the ability to work independently, as well as a team member, to address a wide range of rapidly changing and diverse issues. Candidates must possess excellent writing and verbal communication skills.

For more information: Contact the CDMRP office by calling (301) 619-7071.

### POSITIONS AVAILABLE

**Program Manager.** Responsibilities include the management of an organ-specific research program applying biomedical and behavioral science knowledge to the solicitation, peer-review, and programmatic analysis of research proposals submitted to the CDMRP.

**Science Manager.** Responsibilities include the negotiation and management of funded projects, and reviewing and interpreting research results with a view toward implications on budgeting, safety, and efficacy.

**Program Evaluator.** Responsibilities include the analysis and evaluation of scientific research programs, organizational development, and the effectiveness and improvement of the administration of biomedical research programs.

**Medical Oncologist.** Responsibilities include applying expertise in cancer research and treatment and knowledge of biomedical science principles to overall program management, as well as to the review and analysis of research proposals solicited and received by the CDMRP.



### NOVARTIS INSTITUTE FOR BIOMEDICAL RESEARCH AND NEW FUNCTIONAL GENOMICS DEPARTMENT

It's a new identity for Novartis Pharmaceuticals Corporation's New Jersey-based research and development activities. As a world leader in life sciences, Novartis invests more than \$2 billion annually in R&D. This commitment to the future will enable our new, state-of-the-art Functional Genomics Group to make great strides in understanding gene function and defining molecular pathways associated with human disease.

Scientists will work closely with external Novartis partners, academic institutions and internal therapeutic research areas. This translates into exceptional opportunities for *Drosophila* Scientists to take their expertise into the new millennium.

## *Drosophila Scientists & Senior Scientists*

We are seeking innovative Scientists to join the Research area of our new Functional Genomics Department. Depending upon qualifications, you will either lead or be a member of a functional genomics laboratory that uses *Drosophila melanogaster* to define pathways and networks related to human disease. Results will ultimately be used in the development of new drug targets.

Qualifications for the senior level positions include a Ph.D. with at least two years of postdoctoral experience. Qualifications for the BS/MS level Scientists include 2-3 years of laboratory experience with a thorough knowledge of molecular and/or genetic techniques. Strong communication skills and the ability to work as an effective team member are essential. For the senior level position, several years of experience working with *Drosophila melanogaster* is required, as is familiarity with both genetic and molecular biological techniques associated with the system. Also important is the ability to work independently, design appropriate experiments and convey their data and interpretations to other members of a function genomics team.

You'll find competitive salaries, comprehensive benefits and a unique opportunity to assume an integral role in the enhancement of our new undertaking. **PRINCIPALS ONLY:** please send your resume and letter of interest, indicating salary history/requirements, to: R&D Staffing, Novartis Pharmaceuticals Corporation, 556 Morris Avenue, Building G2, Summit, NJ 07901; or e-mail [hrstaffrd.phuseh@pharma.novartis.com](mailto:hrstaffrd.phuseh@pharma.novartis.com). Please indicate Position VW-5740 on resume and envelope, or as the subject of your e-mail. 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.



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Vertex Pharmaceuticals Incorporated, a publicly owned pharmaceutical company in Cambridge, is engaged in the discovery, development and commercialization of pharmaceuticals for the treatment of diseases for which there are currently limited or no effective treatments. The Company is concentrating on the discovery and development of drugs for the role in the treatment of many diseases including cancer multi-drug resistance, inflammation, and HIV infection and AIDS.

## PHARMACOKINETICS

### ▲ STAFF INVESTIGATOR

This individual will design, conduct, analyze and report results from preclinical and clinical pharmacology studies to gain a better understanding of PK/PD relationships during early stage development of new chemical entities. Duties will include providing sections for preclinical and/or clinical pharmacology for regulatory submissions. Successful candidates will have Ph.D. in Biopharmaceutics/ Pharmacokinetics, Pharmacology or Pharmaceutical Sciences. At least 3-5 years' postdoctoral experience in the design, conduct and analysis of clinical pharmacology and/or preclinical studies; experience in the use of various pharmacokinetic software packages for data analysis and simulations; knowledge of pharmacometrics, population pharmacokinetics and experience in the use of NONMEM; a good understanding of the statistical principles necessary to evaluate the data; familiarity with regulatory submissions; and excellent written and communication skills are also required. **Job Code: 300-32-98**

## BIOPHYSICS

### ▲ STAFF INVESTIGATOR

This individual will provide protein expression, purification, and stabilization capabilities for NMR related projects with a specialization in isotope labeling techniques for NMR structural and screening studies. Duties will include: cloning, expression and purification of protein samples for NMR data collection, biophysical and enzymological characterization of expressed proteins, NMR sample preparation, and management of NMR wet labs. Successful candidates will have Ph.D. in Molecular Biology, Biochemistry or equivalent with 5+ years of experience in cloning, expression and purification of proteins. Experience in biophysical and enzymological characterization of expressed proteins for structural studies, extensive experience in stable isotope labeling for NMR studies, amino acid specific labeling, perdeuteration, and selective protonation strategies is required. Significant experience in NMR sample stabilization and optimization is a must. **Job Code: 400-5-98**

Please submit cover letter and resume on-line (preferred method), to: [www.vpharm.com/jobs](http://www.vpharm.com/jobs), or to: Recruiting Manager, Vertex Pharmaceuticals, Job Code: \_\_\_\_\_, 130 Waverly Street, Cambridge, MA 02139; Fax: (617) 577-6645. Scannable resumes should be forwarded on plain white bond paper, using standard types and fonts, and no bold or italic print.

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## EMINENT SCHOLAR IN MOLECULAR GENETICS THE OHIO STATE UNIVERSITY

The Department of Molecular Genetics at The Ohio State University is initiating a search for a faculty member at the full professor level to fill the position of Ohio Eminent Scholar in Molecular Genetics, an endowed chair that is funded in part by the State of Ohio. We are interested in applicants with exceptional qualifications who are using molecular genetic approaches to study important topics in molecular, cell, or developmental biology of eukaryotic organisms. A highly competitive recruiting package is available, which includes an attractive salary, generous laboratory space in a new building, and substantial funds for equipment, personnel, and operating expenses.

The Ohio State University is undergoing a major expansion in the Molecular Life Sciences that will involve the hiring of at least 30 new faculty during the next few years. The Department of Molecular Genetics is a young, vigorous, and highly interactive 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 in which to live and work. Information about our Department and University can be obtained by contacting our web site: <http://www.biosci.ohio-state.edu/~molgen/molgen.html>.

Applications should include a detailed curriculum vitae, a description of research experience and future plans, and the names and addresses of at least three references. Applications will be accepted until a suitable candidate is hired. Review of applications will begin during autumn 1998. Application materials should be sent to: **Eminent Scholar Search Committee, Department of Molecular Genetics, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210.**

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**Agricultural  
Research  
Service**

**U.S. Department of Agriculture (USDA)**

**Agricultural Research Service (ARS)**

**RESEARCH LEADER/ BIOLOGIST**

**National Center for Cool and Cold Water Aquaculture**

USDA Agricultural Research Service is seeking a Supervisory Research Biologist with a background in aquaculture to be Research Leader of the National Center for Cool and Cold Water Aquaculture in Leetown, West Virginia. This unique National facility is co-located with the Leetown Science Center of the U.S. Geological Survey. The successful candidate will be responsible for conducting and administering basic and applied research that meets the needs of the Center's Mission to support and enhance the Nation's cool and cold water aquaculture production. The incumbent will also serve as Research Program Representative during the design and construction of the Center with a program of applied genetics and breeding, fish health, physiology and nutrition culture and production management, aquaculture engineering, and product quality of cool and cold water species including, but not limited to, rainbow trout, Arctic Char, salmon, and hybrid striped bass. Experience in leading a diverse program related to aquaculture production, protection, and breeding is preferred. A Ph.D. is desirable and research qualifications are determinant in the salary range of GS-14: \$66,138 to \$85,928; GS-15: \$77,798 to \$90,767.

*Candidate must be a U.S. citizen.* For additional information on the position contact **Wilda Martinez** at 215-233-6593 or email at [wmartinez@ars.usda.gov](mailto:wmartinez@ars.usda.gov). Applicants must review the vacancy announcement prior to application submittal. See Website: [www.ars.usda.gov/afm/hrd/resjobs](http://www.ars.usda.gov/afm/hrd/resjobs). For application information/instructions contact **Maryanne Cage** at 304-725-3451, Extension 332.

**Applications must be postmarked by October 15, 1998.**

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*Women and minorities are encouraged to apply.*



## Neuroscience Assistant Professor

The Department of Physiology, University of Wisconsin, invites applications for a tenure-track Assistant Professor position in Neuroscience. We seek candidates who use molecular and cellular approaches in their research and are especially interested in recruiting an individual who uses such approaches in a broader context, i.e., cellular, circuit or systems function. Current departmental focuses in neuroscience include cell signaling, synaptic mechanisms, ion channel structure-function, hearing and motor systems. The successful candidate will participate fully in the teaching programs of the department. Please send a current CV, a 1-2 page summary of research interests and plans for the future, and 3 letters of reference to:

Meyer Jackson, Ph.D.  
Chair, Search and Screen Committee  
Department of Physiology, 127 SMI  
UNIVERSITY OF WISCONSIN  
1300 University Avenue  
Madison, WI 53706

Applications must be submitted by November 15, 1998 to assure full consideration. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.



UNIVERSITY OF  
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MEDICAL SCHOOL

## MUSC MEDICAL UNIVERSITY OF SOUTH CAROLINA

### Faculty Positions Cancer Experimental Therapeutics

Tenure-track faculty positions are available at the level of assistant/associate professor as part of the expansion of the Hollings Cancer Center, Medical University of South Carolina. Applications are invited from individuals with Ph.D. and/or M.D. degrees who are interested in contributing to the development of our Experimental Therapeutics Program. Areas of particular interest are cell cycle control, apoptosis, and mechanisms of anticancer drug resistance. Laboratory-based clinical investigators interested in conducting translational research in these areas are also encouraged to apply. Preferred candidates at the associate professor level will be principal investigators on current peer-reviewed research grants. Appointments will be made within academic departments where mutual interests exist. Highly competitive start-up packages are available, which include support for the purchase of major equipment.

Applicants should send a curriculum vitae, description of research interests, and the names of three references to:

Daniel J. Fernandes, Ph.D., D.Sc.  
Associate Director for Basic Research,  
Hollings Cancer Center  
Medical University of South Carolina  
171 Ashley Avenue  
Charleston, SC 29425-2850

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# A Leader In The Discovery and Development of Protein Kinase Inhibitors

Kinetix Pharmaceuticals, Inc. is a well-funded, privately held biopharmaceutical company specializing in the rational design and development of selective small molecule inhibitors of specific protein kinases involved in the regulation of intracellular signal transduction. Kinetix is using an integrated approach to drug discovery, combining virtual screening, Kinase Assay Arrays, structure-based drug design and focused combinatorial and synthetic chemistries. The Company's strategy is to rapidly discover and optimize highly selective kinase inhibitors as drug candidates to meet important unmet needs in the areas of Immunology, Oncology, Angiogenesis, Asthma/Allergy and Inflammation.

## X-ray Crystallographer - Ph.D.

We are seeking an individual who will be responsible for the crystallization, data collection, and structure solution of novel enzyme/inhibitor complexes to aid in our ongoing drug optimization programs. The successful candidates will have a Ph.D. with at least 2 years' post-doctoral experience in protein crystallography. Experience crystallizing complexes of proteins with small molecule ligands is highly desirable as is industrial experience. **Job Code- XR**

## Protein Chemist - BS/MS/Ph.D.

You will become a member of a successful team currently focused on purifying and biochemically characterizing protein kinases for ongoing structural studies using x-ray crystallography. In addition, you will be responsible for the purification of a diverse array of kinases for high throughput drug screening efforts. Successful candidates will have a BS/MS in biochemistry or related field and 3+ years' industrial experience purifying enzymes for enzymatic characterization or x-ray crystallography. **Job Code - PC**

## Enzymologist - MS/Ph.D.

We are seeking an individual who will be responsible for characterizing the activity and regulation of kinases and developing *in vitro* kinase assays, for the purpose of high throughput chemical screening. Successful candidates will have a MS or Ph.D. with a strong background in Enzymology including 5+ years' direct bench experience in the pharmaceutical industry and some experience in the development of drug screening assays. Specific experience investigating kinases and using fluorescence, colorimetric, and/or radioactive detection technologies is preferred. **Job Code - EZ**

We offer an excellent benefit package including competitive salary, comprehensive benefits, a substantial equity position, and an opportunity to be a part of an exciting novel, integrated approach to drug discovery. Please respond to: **Kinetix Pharmaceuticals, Inc., Human Resources, Job Code ---, 200 Boston Avenue, Suite 4700, Medford, MA 02155. E-mail - [hr@kinetixpharm.com](mailto:hr@kinetixpharm.com)**

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## POSITIONS OPEN

### FACULTY POSITIONS DEPARTMENT OF BIOLOGY EAST CAROLINA UNIVERSITY

The Department of Biology at East Carolina University invites applications for two nine-month tenure-track faculty positions in (i) molecular evolution and (ii) vertebrate physiology or developmental biology.

**Molecular evolution. ASSISTANT PROFESSOR** appointment in the area of molecular evolution effective August 16, 1999. Preference will be given to individuals working in an area of genomics/bioinformatics complementary to existing departmental research interests ([website: http://150.216.20.79/BioTechnology/biotech.html](http://150.216.20.79/BioTechnology/biotech.html)). The applicant will be expected to develop an externally funded research program, contribute to teaching efforts in the undergraduate curriculum and graduate program in molecular biology/biotechnology, and render appropriate professional service. Applicants should send a curriculum vitae, statement of teaching and research interests, and three letters of recommendation to: **Dr. Cindy Putnam-Evans, Chair, Molecular Evolutionary Biologist Search Committee, Department of Biology, East Carolina University, Greenville, NC 27858-4353.**

**Vertebrate physiology or developmental biology. ASSISTANT PROFESSOR** appointment effective August 16, 1999. The applicant should have research experience with vertebrate systems and will be expected to develop an externally funded research program complementary to existing departmental research interests ([website: http://www.ecu.edu](http://www.ecu.edu)). Teaching obligations include responsibility for undergraduate and graduate courses in physiology or developmental biology. Appropriate professional service is also expected. Applicants should send a curriculum vitae, statement of teaching and research interests, and three letters of recommendation to: **Dr. Thomas J. McConnell, Chair, Vertebrate Physiologist/Developmental Biologist Search Committee, Department of Biology, East Carolina University, Greenville, NC 27858-4353.**

Minimum qualifications for both positions include a doctoral degree (Ph.D. or equivalent), postdoctoral experience, and a strong publication record. Review of applications will begin November 15, 1998. Salaries at East Carolina University are nationally competitive. *East Carolina University is an Equal Opportunity/Affirmative Action University and accommodates individuals with disability. Applicants must comply with the Immigration Reform and Control Act. Official transcripts are required upon employment.*

### BIOCHEMISTRY FACULTY POSITIONS

Two **TENURE-TRACK POSITIONS** are available starting in the fall of 1999 in the Department of Chemistry at Auburn University. Although the biochemical research areas are open, successful candidates will have strong chemical orientation and will be expected to develop vigorous research and teaching programs at the Ph.D. and undergraduate levels. Teaching responsibilities will be primarily in the areas of biochemistry/metabolism at undergraduate and graduate levels. A Ph.D. in chemistry or biochemistry and one year of postdoctoral training required. Applicants should submit a curriculum vitae, statements of their research plans and teaching philosophy, and have three letters of reference sent to: **J. H. Hargis, Department of Chemistry, Auburn University, AL 36849.** Review of applications will begin November 5, 1998, and continue until a candidate is selected. *Auburn University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are invited to apply.*

### BASIC SCIENCE FACULTY POSITIONS

The Division of Basic and Pharmaceutical Sciences at the Albany College of Pharmacy has several openings at the **ASSISTANT PROFESSOR** level (tenure track). The Division provides the preclinical science components of the B.S. pharmacy and Doctor of pharmacy curricula. Teaching opportunities exist in biology, physics, physiology/pathophysiology, and medicinal chemistry. A Ph.D. in these or related disciplines and postdoctoral experience are required. Prior teaching experience is desirable and development of a productive research program is expected. Information about the College is available at our [website: www.acp.edu](http://www.acp.edu). Applicants should submit a letter describing their qualifications, three letters of reference, and a curriculum vitae to: **Diane Sylvester, Ph.D., Albany College of Pharmacy, 106 New Scotland Avenue, Albany, NY 12208.** Application deadline is November 1, 1998. *Albany College of Pharmacy is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### TWO FACULTY POSITIONS IN STRUCTURAL BIOLOGY DEPARTMENT OF BIOLOGY Indiana University, Bloomington

The Department of Biology is seeking to hire two Structural Biologists, one at the **ASSISTANT PROFESSOR** level and one at the **FULL PROFESSOR** level. The latter will be appointed **GILL CHAIR OF BIOLOGY** and will enjoy the benefits of a large endowment income. The successful candidates will join a strong and growing group of Biochemists with structural interests—a group that includes members of both the Biology and Chemistry Departments. We welcome applications from candidates who apply physical methods to the study of any significant biochemical problem; we especially encourage applications from those who employ crystallographic or spectroscopic methods to determine macromolecular structures. Generous and competitive start-up packages will be provided to the successful candidates.

These positions are intended to form the core of a new group of Structural Biologists within the Department of Biology and, on the Bloomington campus, of an expanding group of Biologists and Chemists working at the interface between their disciplines. Thus, the Department of Chemistry will be hiring a Macromolecular Crystallographer this year, an additional, modern research building will soon be available, and the newly created Gill Center for Instrumentation Science is taking shape in association with the Department of Chemistry. Within the Department of Biology, recent hirings have significantly expanded our efforts in the areas of microbiology, biochemistry, cell and developmental biology, and evolutionary biology. One consequence of this expansion is that we welcome applications and inquiries from two-career couples, at any level, including those with partners in fields other than structural biology.

Junior candidates should send a curriculum vitae, a statement of research (past, present, and planned), and representative publications, and arrange to have four letters of recommendation to: **Dr. Peter Cherbas, Chair, Structural Biology Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405.** FAX: 812-855-6705; e-mail: [cherbas@indiana.edu](mailto:cherbas@indiana.edu). Senior candidates should send a letter of interest and curriculum vitae to the same address. Review of applications will begin December 1, 1998, and will continue until suitable candidates are identified.

For more information about our department, see our [website: http://www.bio.indiana.edu](http://www.bio.indiana.edu). For information about the Chemistry Department, see their [website: http://www.chem.indiana.edu](http://www.chem.indiana.edu). *Indiana University is an Affirmative Action/Equal Opportunity Employer. Women, minority candidates, and couples are encouraged to apply.*

### FACULTY POSITIONS AVAILABLE IMMUNOLOGY

The University of Tennessee (UT) Department of Microbiology and Immunology is continuing a multiple-year expansion of its immunology group and invites applications for tenure-track positions at the level of **ASSISTANT PROFESSOR**. We are seeking Investigators whose research interests are directed to molecular and/or cellular analyses of contemporary problems in immunology. Candidates will be expected to develop independent, high-quality, extramurally funded research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental, and graduate students. The Department offers a highly interactive intellectual environment with strong extramural research support. The UT Molecular Resource Center also provides cutting-edge research support services and reagents.

The review of applications will begin September 20, 1998, and will continue until the positions are filled. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to:

**Dr. Terrance G. Cooper  
Department of Microbiology and Immunology  
The University of Tennessee, Memphis  
858 Madison Avenue, Room 801  
Memphis, TN 38163**

Detailed information about the Department may be obtained on the World Wide Web at [website: http://microbiology.utm.edu](http://microbiology.utm.edu).

*The University of Tennessee, Memphis is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer.*

## POSITIONS OPEN

### DEVELOPMENTAL BIOLOGIST

As part of an ongoing expansion, the Department of Cell Biology and Molecular Genetics at the University of Maryland at College Park invites applications for a **TENURE-TRACK FACULTY POSITION** in the area of developmental biology. The rank for this appointment is open. Senior candidates will be expected to have attained national and international stature. The successful applicant will be expected to direct a competitively funded research program that is focused on important, fundamental problems in development using a model system. There are multiple opportunities for research interaction and collaboration with faculty in the Department in the areas of signal transduction, pathogenesis, developmental genetics, and cell and molecular biology, using animal, fungal, microbial, and plant systems. Collaborations are also possible with faculty in other Departments across campus. College Park is the flagship campus of the University of Maryland System, and is located in the Baltimore-Washington, D.C. corridor. Its location provides easy access to a large number of educational and governmental institutions. All faculty members of the Department participate in the instructional programs at both the undergraduate and graduate levels. Applicants must have an earned doctorate in an appropriate area of biology, evidence of significant research accomplishments, and a commitment to excellence in teaching. Salary is competitive and commensurate with experience. Applications should be received by December 1, 1998, to receive full consideration, but the search will continue until the position is filled. Materials, including a letter of application, curriculum vitae, statements of research and teaching interests, and the names and addresses of four references should be directed to:

**Dr. Stephen M. Wolniak, Chair  
Developmental Biologist Search Committee  
Department of Cell Biology and Molecular Genetics  
H. J. Patterson Hall  
University of Maryland  
College Park, MD 20742**

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

### FACULTY POSITION MICROBIAL PATHOGENESIS

The Department of Microbiology of The University of Texas Health Science Center at San Antonio (UTHSCSA) invites applications for a tenure-track faculty position at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level. Expertise in microbial pathogenesis (bacterial, parasitic, viral, fungal) is preferred, but individuals with outstanding backgrounds in other areas and an interest in extending their research to include studies of medically relevant microbes are also encouraged to apply. The successful applicant will have a Ph.D. and/or M.D. degree(s) and is expected to establish a high-quality, extramurally funded research program and participate in graduate student training and medical/dental school teaching.

Send curriculum vitae, summary of research interests, and the names and addresses of three references by November 30, 1998, to: **Microbiology Search Committee, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758.** Information concerning the UTHSCSA and the Department of Microbiology can be found through the World Wide Web address at [website: http://www.uthscsa.edu](http://www.uthscsa.edu).

*The UTHSCSA is an Equal Employment Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN IMMUNOLOGY AND GENETICS

Virginia Mason Research Center (VMRC) is recruiting faculty to join our growing programs in immunology, diabetes, and genetics. Construction of a new laboratory research facility provides opportunities for innovative new or established Investigators who can contribute strong research programs in an interactive environment with extensive core facilities.

Applicants should send statement of research interests, curriculum vitae, and list of references to: **Gerald T. Nepom, M.D., Ph.D., Director, Virginia Mason Research Center, 1000 Seneca Street, Seattle, WA 98101.** Further information on VMRC programs can be found at [website: www.vmmc.org/vmrc](http://www.vmmc.org/vmrc). Please respond by October 15, 1998. *VMRC is an Equal Opportunity Employer.*

## Research Scientists Research Associates

### High Throughput Screening (HTS)

HTS positions currently exist for B.S., M.S., and Ph.D.-level bench scientists with expertise in biochemistry and/or molecular biology. Preference will be given to candidates with a minimum of 1-2 years of laboratory experience and demonstrated ability to work independently. Primary responsibilities include employing biochemical approaches in the research and development of novel antibiotics. Studies will involve the design, automation (workstation and robotic), implementation, and execution of novel target based screens. Facility with computer and database systems a plus. Responsibilities to be driven by experience level and capabilities.

## Research Scientists Molecular Biology

Immediate openings exist for qualified candidates to participate in a multi-discipline drug discovery team. The position requires a Ph.D. in molecular biology and 2-4 years of additional training (postdoctoral or industrial). Preference will be given to candidates with experience with *S. aureus* expression or genetics systems. Familiarity with biochemistry, protein purification, or assay development technologies is a plus. The candidate will be expected to participate in the identification and validation of novel drug discovery targets from bacterial and fungal pathogens, the development of drug discovery technology, and to direct research associates. Good communication skills and the ability to function in a multi-task environment are essential.

Cubist Pharmaceuticals is a biopharmaceutical company focused on the research, development, and commercialization of novel antimicrobial drugs to combat emerging strains of drug-resistant bacteria and fungi. At Cubist, we offer competitive compensation, outstanding growth opportunities, and a comprehensive benefits package including group insurance, 401(k), tuition reimbursement, and stock purchase plan. Qualified candidates, please send your résumé to:

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**St. Jude Children's  
Research Hospital**

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## POSTDOCTORAL POSITION

A postdoctoral position is available to study the cellular and molecular basis of latency in mycobacterial infections. The majority of *Mycobacterium tuberculosis* infections are latent, making this a pressing medical problem. This laboratory is using genetically-altered mouse models to investigate the function of cytokines in latency. Current interests are focused on the functions of IFN-gamma and IL-10 in controlling immunity to mycobacteria (see *J. Immunol.* (1997) 158:315; *Blood* (1998) 91:2914; *PNAS* (1996) 93:934).

The ideal candidate will have a strong background in immunology and/or mouse models of infectious diseases who has obtained a Ph.D. and/or M.D. This laboratory is part of the Department of Infectious Diseases which has a strong program in diverse aspects of bacterial pathogenesis. The support facilities and the research environment at St. Jude Children's Research Hospital are exceptional, with strong collaborative interactions between departments within St. Jude as well as affiliated programs in the Memphis area.

This position is available immediately. Interested candidates should send a curriculum vitae and three letters of recommendation to: **Peter Murray, Ph.D., Department of Infectious Diseases, St. Jude Children's Research Hospital, 332 North Lauderdale St., Memphis, TN 38103.** Equal Opportunity Employer

## Leaders in the Search

*Synaptic  
Pharmaceutical  
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world leader in the  
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coupled receptors  
and their functional  
analysis. Our goal is  
to translate basic  
science discoveries  
to novel therapies  
for human disease.*

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Currently, we have these outstanding opportunities for qualified, dedicated professionals:

### Genome Analyst

Working with a dynamic team of computer scientists and molecular biologists, you will be responsible for analyzing the automated search output as well as performing special queries and sequence analysis on G-protein coupled receptors. Position requires an MS along with 2-3 years of relevant experience or a Ph.D with prior experience in GPCR sequence analysis. Extensive experience with the GCG sequence analysis package is also essential as is a working knowledge of common database search programs in a UNIX environment. Send replies to: **Dept-263**

### Sequencing Manager

As an important part of our expanding genomics efforts, you will be supervising and managing our sequencing group. To qualify, you must have an MS along with extensive supervisory experience or a Ph.D and at least 2 years of post doctoral research experience. Previous experience in automated sequencing using ABI 377 XL equipment is also essential as is a working knowledge of data management on a UNIX platform. Send replies to: **Dept-264**

Your rewards will include a competitive salary and an attractive benefits package, including a 401(k) and stock option plan. For immediate consideration, please forward your resume indicating appropriate Dept Code listed above to: **Synaptic Pharmaceutical Corporation, Dept., 215 College Road, Paramus, NJ 07652.** EOE M/F/D/V



## POSITIONS OPEN

### FACULTY POSITION IMMUNOPATHOGENESIS

The Department of Microbiology of The University of Texas Health Science Center at San Antonio (UTHSCSA) invites applications for a tenure-track faculty position at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level. Candidates with an accomplished record of research in the area of host immune responses to viruses, bacteria, parasites, or fungi should apply. Outstanding candidates who wish to extend their studies into the area of immunology of infection are also encouraged to apply. The successful applicant will have a Ph.D. and/or M.D. degree(s) and is expected to develop/maintain innovative research programs and to participate in departmental teaching activities. This is an exceptional opportunity to join a strong department committed to excellence in research and teaching and is located in a desirable academic-geographic setting. Access to state-of-the-art insectary is available for vaccine development.

Applicants should mail curriculum vitae, a statement of current and future research goals, and arrange to send three letters of reference by November 30, 1998, to: Immunology Search Committee, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758. Information concerning the UTHSCSA and the Department of Microbiology can be found through the World Wide Web address at [website: http://www.uthscsa.edu](http://www.uthscsa.edu).

The UTHSCSA is an Equal Employment Opportunity/Affirmative Action Employer.

### FACULTY POSITION CELL CYCLE REGULATION

The Department of Pharmacology at the University of Tennessee, Memphis is enlarging its research programs and invites applications for a tenure-track **ASSISTANT PROFESSOR** position in the area of cell cycle regulation. Candidates with a Ph.D. in pharmacology or related discipline, and/or M.D. degree, with excellent and productive postdoctoral training are sought. Applicants employing contemporary approaches to investigate molecular mechanisms involved in cell cycle regulation will be given preference. The successful candidate will have the opportunity to interact with faculty who have established programs in growth factor signaling, regulation of gene transcription, G protein coupled receptors, and tumor cell biology within the University's Department of Pharmacology and at St. Jude Children's Research Hospital. An excellent start-up package and competitive salary will be provided, and participation in departmental teaching programs will be expected. Applications should include a curriculum vitae, statement of research interests, two representative publications, and at least three letters of reference. Send complete application by October 31, 1998, to: Dr. Burt M. Sharp, Van Vleet Professor and Chair, Department of Pharmacology, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163. UT is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer. Minorities and women are especially encouraged to apply.

### EVOLUTIONARY ECOLOGIST

The Department of Biology at Boston University invites applications for an **ASSISTANT PROFESSOR** to begin in the fall of 1999. The successful candidate will be expected to have a strong background in organismal biology, and use molecular approaches to address questions in one or more of the following research areas: developmental biology, population biology, and evolutionary ecology. Teaching responsibilities include a team-taught course in introductory biology (ecology, behavior, and evolution), and an upper-division/graduate-level course in population biology. 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 expanding emphasis in ecology, behavior, evolution, and conservation biology. Applicants should send a curriculum vitae, statements of research and teaching interests, copies of three major publications, and three letters of reference by November 1, 1998, to: Dr. James F. Traniello, Chair, Population/Evolutionary Ecology Search Committee, Department of Biology, 5 Cunningham Street, Boston University, Boston, MA 02215.

Boston University is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### VIROLOGIST FACULTY POSITION THE UNIVERSITY OF MARYLAND, COLLEGE PARK

As part of an ongoing expansion, the Department of Cell Biology and Molecular Genetics invites applications for a faculty position in virology. Applicants are being sought at the **SENIOR or JUNIOR RANK** who use innovative molecular, genetic, and biochemical approaches to investigate fundamental problems in virology. The successful applicant should complement existing strengths in molecular genetics, cell biology, or immunology. The University of Maryland is within the Washington, D.C. metropolitan area and is close to the NIH, Naval Medical Research Laboratories, and the Agricultural Research Center, and offers many opportunities for collaborative research. The appointment includes a highly competitive package consisting of generous start-up funds, newly renovated laboratory space, and access to state-of-the-art core facilities. An outstanding research record and a solid history of generating research support are prerequisite for an appointment at a tenured rank. Teaching responsibilities include participation in the undergraduate and graduate programs. Applicants should send curriculum vitae, a statement of current and future research interests, copies of three to five representative publications, and three letters of reference directly to: Dr. E. Gantt, Chair of the Search Committee, Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742. For best consideration, application material should be received by November 10, 1998. The University of Maryland is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

### FACULTY POSITIONS IN BIOLOGICAL PHYSICS EMORY UNIVERSITY

As the Department of Physics looks forward to moving into a new science complex, we invite applications for two faculty positions in experimental biological physics, one at the **ASSISTANT** and one at the **ASSOCIATE PROFESSOR** level, beginning in the fall 1999. Applicants must be strongly committed to excellence in both research and teaching at the graduate and undergraduate levels. Applicants for the senior position are expected to have an established international scientific reputation with active research programs. Candidates who are interested in studying the physical properties, structures, and functions of biological substances; neurobiological physics; nonlinear phenomena and pattern formation in biological systems; or bioelectronics are strongly encouraged to apply. Consideration of the candidates will begin on January 15, 1999, but applications will be accepted until the search is closed. Applicants should send a curriculum vitae, a list of publications, a brief statement of research interests, and the names of at least three references to: Dr. B. H. Vincent Huynh, Faculty Search Committee Chair, Department of Physics, 1001 Rollins Research Building, Emory University, Atlanta, GA 30322-2430. Emory University is an Affirmative Action/Equal Opportunity Employer.

### TENURE-TRACK FACULTY POSITION EXPERIMENTAL BIOPHYSICS RICE UNIVERSITY

The Physics Department at Rice University invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** from persons with experimental research interests and expertise in the study of physics of biological systems or materials. This position is associated with a new university-wide initiative to establish a Center for Nanoscale Science and Technology. Applicants should send a dossier including a curriculum vitae, a statement of research and teaching interests, a list of publications, and two or three of their most interesting papers. Applicants should also arrange for three letters of reference to be sent to: H. W. Huang, Chair, Faculty Search Committee, Physics Department—MS 61, Rice University, P.O. Box 1892, Houston, TX 77251-1892. The appointment is available July 1999 or later. Review and interview will begin in December 1998. Rice University is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

### TENURE-TRACK FACULTY POSITION IN THE ATMOSPHERIC SCIENCES

The Department of Environmental Sciences at the University of Virginia invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** in the atmospheric sciences. This interdisciplinary department includes Atmospheric Scientists, Ecologists, Geoscientists, and Hydrologists and offers B.A., M.S., and Ph.D. degrees.

Candidates from all atmospheric sciences disciplines are invited to apply. We especially encourage applications from scientists whose research and teaching strengths and interests show promise for capitalizing on the unique interdisciplinary nature of the department. The successful candidate will be expected to develop high-quality programs in research and teaching at both the undergraduate and graduate levels and to participate in teaching our undergraduate core course in the atmospheric sciences.

Applicants should include one-page statements on their research and teaching interests and experience, a curriculum vitae, and contact information for three references. The application deadline is December 15, 1998. Applications should be sent to:

James N. Galloway, Professor and Chair  
Department of Environmental Sciences  
University of Virginia  
Clark Hall  
Charlottesville, VA 22903

We encourage applications of individuals from underrepresented groups. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

### FACULTY POSITION IN DEVELOPMENTAL NEUROSCIENCE

The Department of Cell and Molecular Biology of Tulane University anticipates filling a tenure-track position at the level of **ASSISTANT PROFESSOR** beginning in the fall of 1999. Targeted are individuals with research interests in cellular neuroscience with an emphasis in mammalian development, although other qualified applicants will be considered. Applicants must have a Ph.D., at least two years of postdoctoral experience, a strong publication record, and show considerable potential for obtaining external funding. The successful applicant will be expected to establish a vigorous, independent research program and to participate in undergraduate and graduate teaching. Opportunities exist for research collaborations and participation in Tulane's Neuroscience Interdisciplinary Graduate Program, Interdisciplinary Graduate Program in Molecular and Cellular Biology, and Center for Bioenvironmental Research, and in the Greater New Orleans Chapter of the Society for Neuroscience. Applicants for the position should send a curriculum vitae and a brief statement of research plans, and should arrange to have three letters of recommendation sent to:

Dr. Ken Muneoka, Chair  
Department of Cell and Molecular Biology  
Tulane University  
New Orleans, LA 70118

Tulane University is an Equal Opportunity/Affirmative Action Employer and encourages minority and female applicants to apply.

### 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 1999. A Ph.D. and postdoctoral experience are required. We seek an individual who will establish a competitive, molecular-based research program in prokaryotic physiology or pathogenesis. Start-up funding and release time for research are available. He/she should be broadly trained in microbiology and will teach an upper-division lecture/laboratory course in general microbiology and an advanced seminar course in his/her specialty. He/she will also participate in a team-taught introductory biology course and direct year-long, senior thesis research in the biology and biochemistry/molecular biology programs. Reed College is a selective liberal arts institution with a distinguished record of educational accomplishment and a strong commitment to scholarship and undergraduate research ([website: http://web.reed.edu/](http://web.reed.edu/)). Applications including curriculum vitae, statement of research interests, pertinent reprints, and three recent letters of reference should be sent by December 1, 1999, to: Dr. David Dalton, Search Committee Chair, Biology Department, Reed College, Portland, OR 97202-8199. Reed College is an Equal Opportunity Employer.

## LAWRENCE LIVERMORE POSTDOCTORAL FELLOWSHIP

The Lawrence Livermore National Laboratory Director has established a Lawrence Livermore Postdoctoral Fellowship. This is a highly desirable, prestigious position with ample resources and freedom to conduct cutting edge research in the fields of the candidate's choice. Duration for the Fellowship is three years. Two openings are immediately available, and two additional positions will be available every year to a maximum of six. Positions are awarded only to candidates with exceptional talent, credentials, and a track record of research accomplishment.

Candidates will do original research in one or more aspects of science relevant to the mission and goals of LLNL which include: Physics, Computational Mathematics, Computer Science, Chemistry, Material Science, Engineering, Environmental Research, Atmospheric Science, Geological Sciences, Energy, Laser Science, and Biological Science. Successful candidates may participate in experimental or theoretical work at LLNL, and will have access to LLNL's extensive computing facilities, specialized laboratory facilities, and field equipment. A senior scientific staff member will serve as a mentor to each of the Fellows. The candidates will receive full management and administrative support. The salary is \$6000/mo.

Please refer to our web page <http://ep.llnl.gov/urp/fellowship.html> for eligibility requirements and application information. Please reference source code AJSCA28AD

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UNILEVER has the distinction of ranking with the top consumer packaged good companies in the world in sales and innovation. We develop and market over 1000 foods and beverages, soaps and detergents, and home and personal care products including *Pond's*, *Elizabeth Arden*, *Dove*, *Lever 2000* and *Vaseline Intensive Care*. Eighty percent of our products rank number one or two in their market category. With sales topping \$50 billion, Unilever currently operates in 90 countries and employs 290,000 people around the world. Our global research center based in Edgewater, New Jersey currently seeks an experienced individual recognized for research and project leadership in the field of skin research.

### Group Leader - Skin Research

This position will bridge bioscience research programs with clinical research to optimize the marketing potential of our products. Our ideal candidate must have creative insight and ability to develop novel clinical methodologies that lead to greater observation and understanding of physiological changes in human skin. This knowledge will lead to the design of clinical studies to synthesize what is known about skin conditions such as aging, irritation, dryness and the development of new, innovative, sensitive measurement methodologies for studying these conditions including the evaluation of the effect of topically applied cosmetic products.

Candidates should possess a Ph.D. in bioscience (i.e., biology, biochemistry, pharmacology), strong written and verbal communication skills, and proven ability to work across multiple research groups. The ideal candidate will have 2+ years experience in skin research and project leadership.

As an international leader, Unilever offers a competitive compensation package and a comprehensive benefits and relocation program. For consideration, please forward a full C.V. or resume, including publications to: **Human Resources Dept. CR-Science, Unilever Research U.S., 45 River Road, Edgewater, NJ 07020 or E-Mail: [job.mca@unilever.com](mailto:job.mca@unilever.com)** providing CR-Science as the subject. To learn more about Unilever, please visit our web site at <http://www.unilever.com>. We appreciate your interest in our company and will contact applicants who most closely meet our immediate requirements. Unilever is an Equal Opportunity Employer m/f/d/v.



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### Executive Director ILSI Risk Science Institute



The International Life Sciences Institute (ILSI), a worldwide non-profit, scientific foundation, seeks an executive director for its Washington DC-based Risk Science Institute (RSI). The ILSI RSI was established in 1985 to improve risk assessment methodology by strengthening the scientific principles on which risk assessments are based. The position responsibilities include identifying critical areas where research is needed to improve the methodology of assessing human health risks; managing ILSI RSI scientific programs; providing oversight and guidance for grants with outside agencies, including the U.S. government; proposing and administering a yearly budget; staff management and development; and identification and maintenance of funding sources for RSI programs. Requirements include a relevant degree (M.D. or Ph.D. in toxicology, pharmacology, or related science) a minimum of ten years of progressively responsible scientific and managerial experience at an executive and/or senior staff level; outstanding communication skills; knowledge of government grant and contract procedures and regulatory affairs; the ability to analyze and critique scientific documents; and the ability to work cooperatively and collaboratively with individuals at all levels. Please send resume, including salary history and requirements, to the ILSI Administrator, 1126 16th St., NW, Washington, DC 20036 or fax to 202-659-3859. EOE/MF



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**Research on zinc finger transcriptional repressors, epithelial cell growth, and cancer.** Postdoctoral position immediately available for a highly motivated individual to study the role of novel zinc finger proteins in transcriptional repression and in the regulation of normal and neoplastic pancreatic epithelial cell growth\*. The successful candidate will be part of a multidisciplinary team using state-of-the-art molecular and cell biological techniques. Applicant should have previous experience in protein chemistry and/or molecular biology. Send curriculum vitae and three references to:

**Raul Urrutia, M.D.**

**GI Research Unit**

**Mayo Clinic, Alfred 2-435**

**200 First Street SW**

**Rochester, MN 55905**

**Fax: 507/255-6318,**

**e-mail: [urrutia.raul@mayo.edu](mailto:urrutia.raul@mayo.edu)**

*Mayo Foundation is an Affirmative Action and Equal Opportunity Employer and Educator.*

*\*J. Clin. Invest. 99(10):2365, 1997; J. Biol. Chem. 273(40):25973, 1998.*

## POSITIONS OPEN

### FACULTY POSITION VASCULAR PLANT SYSTEMATIST

The Department of Botany, The University of Tennessee, Knoxville seeks a Vascular Plant Systematist for a tenure-track **ASSISTANT PROFESSOR** appointment to begin August 1, 1999. A Ph.D. is required and postdoctoral experience is preferred. A commitment to excellence in research and teaching is required. The use of field-based and modern systematics techniques to explore questions of broad interest is preferred. Graduate supervision and external research support are expected. Teaching duties will include participation in introductory courses and development of an appropriate advanced course. Applicants should submit a complete curriculum vitae (no more than five reprints), a brief summary of research interests (no more than two pages), and the names of three referees to: **Dr. Karen W. Hughes, Department of Botany, The University of Tennessee, Knoxville, TN 37996-1100**. Screening of applications will begin November 30, 1997. For additional information on the department see website: <http://fp.bio.utk.edu/botany/>.

UTK is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer.

### FACULTY POSITIONS THE AMERICAN UNIVERSITY IN CAIRO

Two openings to teach, in English, undergraduate courses in the areas of cell biology/molecular biology, ecology/environmental biology, and microbiology/genetics. In addition to their specialty, appointees will be expected to teach courses in general biology and scientific thinking. Normal teaching load is three courses per semester. The Ph.D. degree is required, and teaching experience is preferred. Two-year appointments (renewable) begin September 1999. Rank, salary according to scale based on qualifications and experience. For expatriates, housing, round-trip air travel for appointee and accompanying family to Egypt, plus schooling for up to two children included. In view of AUC's protocol agreement with the Egyptian Government, which requires specific proportions of Egyptian, U.S., and third-country citizen faculty, at this time preference will be given to qualified applicants who are U.S. citizens. Mail letter of application specifying Job # 1/2-BIOL with résumé and names and addresses of three references to: **Dr. Earl Sullivan, Acting Provost, The American University in Cairo, 420 Fifth Avenue, Floor 3SC, New York, NY 10018-2729** before November 15, 1998. AUC is an Equal Opportunity Employer.

### ASSISTANT PROFESSOR HUMAN MOLECULAR GENETICS

The Department of Neurology and Institute of Human Genetics at the University of Minnesota are seeking applicants for a tenure-track position with expertise in the area of human molecular genetics of neurological diseases. The successful applicant must demonstrate outstanding potential for the development of an independent externally funded research program. Required qualifications include a Ph.D. and research experience in human molecular genetics. Preference will be given to candidates with an interest in the hereditary ataxias. Send curriculum vitae, a brief description of research experience and interests, and the names of three references to: **L. Ranum, Department of Neurology and Institute of Human Genetics, Box 295 Mayo, 420 Delaware Street S.E., Minneapolis, MN 55455**. The deadline for applications is November 13, 1998.

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

### ASSISTANT PROFESSORSHIPS IN INORGANIC, ORGANIC, AND PHYSICAL CHEMISTRY

Harvard University  
Department of Chemistry and Chemical Biology

Applicants are invited to apply for Assistant Professorships in inorganic, organic, and physical chemistry. Applicants should arrange to have three letters of recommendation sent independently and should provide a curriculum vitae, a list of publications, and outlines of two future research projects. Applications and supporting materials should be sent to: **Professor James Anderson, Chairman, Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford Street, Cambridge, MA 02138-2902**. Harvard University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority group members.

## POSITIONS OPEN



University of Alberta  
Edmonton

The Department of Medical Genetics invites applications from outstanding scientists investigating any aspect of molecular genetics and biology related to human disease or animal models, for tenure-track positions. The study of developmental pathways and of multifactorial traits are among the areas of interest. Applicants must have a Ph.D. or Ph.D.-M.D., with postdoctoral training, and be able to establish a strong independent research program. Appointments are expected primarily at the level of **ASSISTANT PROFESSOR**, but more **SENIOR** positions are possible, in accordance with qualifications and experience of the candidates.

This new department, in the Faculty of Medicine and Oral Health Sciences, occupies newly renovated facilities including research laboratories and clinical and diagnostic services. Department information available on website: [www.ualberta.ca/~rwevrick/MEDGEN.html](http://www.ualberta.ca/~rwevrick/MEDGEN.html). The closing date for applications is December 15, 1998. Candidates are invited to submit a résumé, research plan, and names of three references to:

**Diane W. Cox, Professor and Chair  
Department of Medical Genetics  
839 Medical Sciences Building  
Edmonton, Alberta T6G 2H7 Canada**

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents. The University of Alberta is committed to the principle of Equity in Employment. As an employer, we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disability, and members of visible minorities.*

### FACULTY POSITION COMPARATIVE VERTEBRATE ENDOCRINOLOGIST

The Department of Zoology at the University of Toronto invites applications for a tenure-track position in comparative vertebrate endocrinology at the **ASSISTANT PROFESSOR** level, effective July 1, 1999. The successful candidate will be expected to develop a vigorous, externally funded research program, train graduate students, participate in departmental teaching at both the graduate and undergraduate levels, and collaborate with colleagues in evolutionary biology, molecular biology, and physiology. Applicants should submit a curriculum vitae, copies of up to four recent publications, a statement of present and projected research and teaching interests not to exceed three pages, and arrange for three letters of reference to be forwarded by the closing date of 18 December 1998.

Applications should be sent to: **Professor Stephen S. Tobe, Chair, Comparative Vertebrate Endocrinology Search Committee, Department of Zoology, University of Toronto, 25 Harbord Street, Toronto, Ontario M5S 3G5 Canada**.

*In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The University of Toronto encourages applications from qualified women or men including members of visible minorities, aboriginal persons, and persons with disability.*

### VERTEBRATE GENETICS FACULTY POSITION DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS University of California, San Francisco

The Department of Biochemistry and Biophysics offers a **TENURE-TRACK POSITION** at any level beginning fall 1999. Individuals working on problems in vertebrate genetics, particularly humans, mice, or zebrafish, will be considered. Candidates should hold a Ph.D. or M.D. degree and will be expected to establish a dynamic research program and be a top-quality teacher in graduate and professional school courses. Applicants should submit a curriculum vitae, summary of research accomplishments (two pages), description of future research plans (two pages), copies of major publications, and request three to five letters of recommendation to be sent to: **Faculty Search Committee, Biochemistry and Biophysics Department, 513 Parnassus Avenue, S-960, University of California, San Francisco, CA 94143-0448**. Applications received after December 1, 1998, may not be considered. We encourage women and minorities to apply.

## POSITIONS OPEN

### FACULTY POSITIONS IN VIROLOGY AND EUKARYOTIC PATHOGENS Washington University Medical School in St. Louis

The Department of Molecular Microbiology at the Washington University School of Medicine solicits applications for two tenure-track appointments as **ASSISTANT PROFESSOR**, beginning in the fall of 1999. Our program has a strong emphasis on microbial pathogenesis in prokaryotic, viral, and eukaryotic systems (information can be found at website: [www.microbiology.wustl.edu](http://www.microbiology.wustl.edu)). There are numerous common research facilities in our department and university, and tremendous potential for collaborative interactions. We are seeking interactive individuals with a commitment to teaching and establishing a vigorous and outstanding independent research program. In virology, we are especially interested in those Investigators focusing on viral pathogenesis, broadly defined, particularly in systems other than the herpes virus family. For eukaryotic microbial pathogens, we seek individuals focusing on pathogenesis in fungal and protozoal diseases, and/or basic studies of the causative organisms. Applicants should send a detailed curriculum vitae, a few selected reprints, a brief description of current and planned research interests, and arrange to have three letters of reference sent by November 15, 1998, to: **Dr. Stephen M. Beverley, Chairman of Molecular Microbiology, Attn: Faculty Search Committee, Washington University School of Medicine, Campus Box 8230, 660 South Euclid Avenue, St. Louis, MO 63110**.

WUMS is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

### DEAN SCHOOL OF SOCIAL ECOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

The University of California, Irvine invites applications and nominations for the position of Dean of the School of Social Ecology. We seek an internationally recognized scholar within the academic community who will bring vision and innovative leadership to the School. Candidates must have proven administrative ability and a demonstrated commitment to academic excellence to further advance the School's standing in research, undergraduate and graduate education, and service. The scholarly achievements of this individual should be appropriate for an appointment as Full Professor, and should strengthen an existing area of excellence in one of the School's four Departments: Criminology, Law and Society, Environmental Analysis and Design, Psychology and Social Behavior, or Urban and Regional Planning.

Applications and nominations will be received until the position has been filled. However, the screening process will begin immediately, and individuals are encouraged to apply prior to December 21, 1998.

Nominations and expressions of interest, along with a curriculum vitae and the names and addresses of three referees, should be submitted to:

**Chair, Social Ecology Dean Search  
University of California, Irvine  
509 Administration  
Irvine, CA 92697-1000**

The University of California, Irvine is an Equal Opportunity Employer committed to excellence through diversity.

### FACULTY POSITION IN VASCULAR BIOLOGY

The Department of Pharmacology, University of Illinois, College of Medicine, Chicago, invites applications for a tenure-track faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. Applicants should have demonstrated the ability to develop an independent research program and success in obtaining NIH support. The successful candidate is expected to have a solid publication record and an independent NIH-funded research program. The department wishes to add to its strengths in vascular biology. Areas of research include signaling in endothelial cells, transcriptional regulation of endothelial adhesion molecules, control of endothelial barrier function, angiogenesis, cadherin function, and transendothelial leukocyte trafficking. The position comes with an extensive start-up budget, renovated space, and competitive salary package. Please send a complete curriculum vitae, a brief statement of research interest, and names of three references to: **Dr. Richard Ye, Department of Pharmacology (M/C 868), University of Illinois at Chicago, 835 South Wolcott, Chicago, IL 60612**. For fullest consideration, please submit applications by December 15, 1998. UIC is an Affirmative Action/Equal Opportunity Employer.



## BIOTECHNOLOGY OUTREACH

The **Fralin Biotechnology Center** at Virginia Tech is seeking a **coordinator** for an established educational outreach program. The successful candidate should have an advanced degree in a biological science with a good working knowledge of molecular biology. Excellent communication, organizational, and computer skills are required. Salary will be commensurate with experience.

Responsibilities will be to develop and conduct biotechnology workshops across Virginia, pursue outside funding for the program, network with biotechnology educators, assist with the equipment loan program, edit a quarterly newsletter, develop industry outreach program, and other duties as required. See the Fralin web site [www.biotech.vt.edu](http://www.biotech.vt.edu) for more information about the Fralin Biotechnology Center and outreach program.

Qualified applicants should send a complete curriculum vita, and names and addresses of three references by **November 1 (or until position is filled)** to the attention of:

Mr. Don Ball  
Fralin Biotechnology Center  
Virginia Tech (0346)  
Blacksburg, Virginia 24061  
phone: 540 231-6934  
fax: 540 231-7126  
email: [biotech@vt.edu](mailto:biotech@vt.edu).

Virginia Tech is an **Equal Opportunity Employer**.



## WADSWORTH CENTER New York State Department of Health ASSISTANT STAFF SCIENTISTS

Applications are invited for several tenure track staff scientist positions at the **Wadsworth Center ([www.wadsworth.org](http://www.wadsworth.org))**, a multi-disciplinary public health and research laboratory. Candidates will support programs involved in molecular biology and genetics including applications in infectious disease, clinical chemistry and genetic or cytogenetics diagnosis. Activities include development and validation of new methodologies, assessment of genetic parameters in selected populations, and evaluation and implementation of diagnostic laboratory oversight criteria including administration of proficiency testing programs.

Successful candidates will join an organization that values its long history of excellence in research and service and is committed to protecting and improving the health of New Yorkers through analysis, investigation and research, as well as laboratory certification and educational programs.

Starting salaries range from \$27,766 to \$42,848 based on education and experience. Applicants must have a minimum of a BS degree in an appropriate field and one year experience in that field. An MS or Ph.D degree with experience is strongly preferred.

The Wadsworth Center is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

Preference will be given to responses received before October 20, 1998. Please forward a curriculum vitae with the names of three references to:

Dr. Victoria Derbyshire, Chair, Search Committee  
Wadsworth Center, New York State Department of Health  
PO Box 22002, Albany, NY 12201-2002

N.Y.S. DEPARTMENT OF HEALTH

## JSPS FELLOWSHIPS

### FOR BIOMEDICAL AND BEHAVIORAL RESEARCH IN JAPAN

To promote cooperation in biomedical and behavioral research between the United States and Japan, the Japan Society for the Promotion of Science (JSPS) offers flexible opportunities for American scientists to pursue collaborative research in Japanese universities and other eligible research institutions.

Through arrangements with the Fogarty International Center (FIC) of the National Institutes of Health (NIH), the JSPS will award **short-term fellowships** for collaborative research in two categories:

- 1) Short-term Fellowships for **senior scientists** for periods ranging from **seven to sixty days**. Applications will also be considered from pre-doctoral and post-doctoral level researchers with exceptional promise.
- 2) Short-term **Postdoctoral** Fellowships for periods ranging from **three to eleven months**. The American scientist must have received the doctoral degree within ten years prior to April 1, 1999.

*Application deadline is January 15, 1999*

Recipients must arrive in their host laboratories by March 31, 2000.

Detailed application information and guidelines for these short-term fellowships and information on other Japan fellowship programs may be obtained from the Fogarty International Center web site at: [www.nih.gov/fic/opportunities/ff.html#japan](http://www.nih.gov/fic/opportunities/ff.html#japan)

Those without web access or needing clarification should contact The JSPS Program Officer by email at [jsps@nih.gov](mailto:jsps@nih.gov)

#### JSPS Program

Division - International Training and Research  
Fogarty International Center  
National Institutes of Health  
Building 31, Room B2C39  
31 Center Drive, MSC 2220  
Bethesda, MD 20892-2220  
Tel: 301-496-1653  
Fax: 301-402-0772  
[jsps@nih.gov](mailto:jsps@nih.gov)

## POSITIONS OPEN

### VASCULAR PLANT SYSTEMATICS

The Division of Biology of Kansas State University invites applications for a nine-month tenure-track position at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level in vascular plant systematics, beginning during the 1999–2000 academic year. We seek a broadly trained individual with an established and extramurally funded research program that includes modern techniques and analytical tools to address fundamental questions in plant evolution and systematics. It is expected that the successful candidate will serve as **CURATOR/DIRECTOR** of the Kansas State University Herbarium and will participate in the Division's graduate and undergraduate curriculum. An interest in the Great Plains flora and research expertise that complements the existing strengths in grassland ecology at Kansas State University are preferred. A Ph.D. or equivalent is required. The position includes a competitive salary and start-up package.

The Division of Biology is a large (60 faculty scientists) and diverse unit with a strong record of research productivity and funding. Within the Division, there are a number of faculty with research interests relevant to plant systematics, ecology, and evolution; for more information see [website: http://www.ksu.edu/biology](http://www.ksu.edu/biology). The Konza Prairie Research Natural Area ([website: http://climate.konza.ksu.edu/](http://climate.konza.ksu.edu/)), a tall-grass prairie reserve that is the site of much of the ecological research within the Division, is 15 kilometers from the University.

Applicants should submit a curriculum vitae, selected reprints, and a brief description of their research interests, and have three letters of reference sent to: **Alan K. Knapp, Chair, Plant Systematics Faculty Search Committee, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506-4901**. Review of applications will begin November 6, 1998, and continue until the position is filled. *KSU is an Equal Opportunity/Affirmative Action Employer, and actively seeks diversity among its employees.*

### ASSISTANT PROFESSOR MOLECULAR PATHOGENESIS

The Department of Microbiology and Immunology at the University of Oklahoma Health Sciences Center is seeking applications for a tenure-track position at the Assistant Professor level. Individuals in any research area of bacterial or fungal molecular pathogenesis are invited to submit their credentials. Major responsibilities will include establishing an extramurally funded independent research program and participation in the teaching of medical/dental and graduate students. The Department consists of 15 full-time faculty and maintains a multimillion-dollar annual research budget generated from more than 40 extramural grants. An outstanding training program is in place that supports 14 Postdoctoral Fellows and 36 graduate students. For an overview of the Department, visit our [website: www.microbiology.ouhsc.edu](http://www.microbiology.ouhsc.edu). Interested candidates should submit a letter describing their research interests and teaching goals, curriculum vitae, and the names of at least three references to: **Dr. Madeleine Cunningham, Chair of the Search Committee, Department of Microbiology and Immunology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190**. Applications will be reviewed beginning November 16, 1998. *The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Applications from women and ethnic minorities are strongly encouraged.*

### THE UNIVERSITY OF FLORIDA

Seeks an **ASSISTANT SCIENTIST** in the College of Medicine, Department of Medicine, Division of Pulmonary Medicine. Ph.D. degree required with at least 10 years of experience in membrane biology and amino acid transport with publications in these areas in peer-reviewed scientific journals. Qualified candidates must have experience with isolating and purifying plasma membranes and caveolar membranes from mammalian cells, with reconstitution of amino acid transporters in proteoliposomes, with electrophoresis and immunoblot analyses, and with nitric oxide biology in endothelial cells. This is a non-tenure-track, 100.00 FTE position. Salary and benefits commensurate with experience. Recruiting deadline October 22, 1998. Anticipated starting date: December 1, 1998. Please submit curriculum vitae and other information to: **Dr. Jawaharlal M. Patel, Research Service (151), VA Medical Center, Gainesville, FL 32608-1197**. *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### PROFESSOR AND HEAD DEPARTMENT OF VETERINARY ANATOMY AND PUBLIC HEALTH Texas A&M University

The College of Veterinary Medicine, Texas A&M University is seeking applications and nominations for the position of Professor and Head of the Department of Veterinary Anatomy and Public Health. Applicants must be nationally and internationally recognized scholars and will be expected to have strong leadership and interpersonal skills with a vision for the future. An understanding of the multifaceted role of a combined basic and applied science department in contemporary veterinary medicine with identified strengths in toxicology, reproductive biology, genetics, neuroscience, and public health is essential. Additionally, an appreciation for the opportunities to promote creative interdepartmental and interdisciplinary collaborative programs will be necessary. Excellent collaborations currently exist with the College of Medicine, the School of Rural Public Health, and the College of Agriculture and Life Sciences. Experience dealing with the agricultural and engineering experiment stations in a public land grant institution will also be helpful. Departmental responsibilities will include administrative leadership of the instruction of veterinary professional students, graduate students, and a large undergraduate program in biomedical sciences.

Applicants should have a Ph.D. in a biomedical science and a record appropriate for appointment at the level of Professor and for the awarding of tenure. In addition, a D.V.M./V.M.D., M.D., M.P.H., Dr.P.H., or equivalent is desirable. The successful candidate must have demonstrated excellence as an extramurally funded, independent Investigator and possess superb teaching credentials. Strong communication skills, an interest in faculty and staff development, experience in financial and budgeting matters, and an understanding of the importance of private and corporate fundraising are highly desirable.

Interested candidates should submit a letter of introduction outlining career goals and professional interests, a curriculum vitae, and the names and addresses of three references to: **Dr. Glen A. Laine, Professor and Head, Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, Texas A&M University, College Station, TX 77843-4466**. Application review will begin December 1, 1998, but applications will be accepted until the position is filled. Inquiries may be directed to: **Dr. Laine, Telephone: 409-845-7261; FAX: 409-845-6544; e-mail: glaine@tamu.edu**.

*Texas A&M University affirms diversity as essential to its missions, as an Equal Opportunity Employer/Educator, and encourages applications from women and minorities.*

### ASSISTANT/ASSOCIATE PROFESSOR POSITIONS IN STRUCTURAL BIOLOGY Weill Medical College of Cornell University

As part of a major expansion in its basic biomedical sciences research programs, Weill Medical College and Graduate Medical School of Cornell University is seeking faculty to fill positions in a new initiative in structural biology. Candidates with research interests in the structure and function of macromolecular assemblies, organelles, and cells are encouraged to apply. (Positions in X-ray crystallography and NMR spectroscopy of proteins have already been filled.) A total of six new faculty will be recruited.

Targeted areas of research include signal transduction mechanisms, membrane structure and function, cytoskeleton and extracellular matrix, and interactions of cells with infectious agents. Exceptional candidates in other appropriate fields will also be considered.

Candidates for Assistant Professor should demonstrate the potential for establishing a vigorous independent research program, and candidates for Associate Professor should have an outstanding record of productivity. The recruited faculty will occupy newly renovated laboratory and office space, and generous start-up support will be provided. In addition to medical student teaching, candidates will participate in the Graduate School of Medical Sciences, which includes faculty from the Weill Medical College and the Sloan-Kettering Institute. Applications should include a curriculum vitae, statement of research interests, and three letters of recommendation. Applications should be sent to: **Dr. Frederick R. Maxfield, Chairman, Structural Biology Recruitment Committee, Box# 27, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021**.

*Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.*

## POSITIONS OPEN

### CHAIR, DEPARTMENT OF PATHOBIOLOGY UNIVERSITY OF FLORIDA

Qualifications: Advanced academic degree; research leadership training and experience; demonstrated administrative skills and experience; educational (teaching) experience; experience within a medical diagnostic environment.

The University of Florida, College of Veterinary Medicine, is seeking applications and nominations for a departmental Chair who is expected to develop and sustain quality course work in the department as appropriate to the current and future educational goals of undergraduate, professional, resident, and graduate programs. The individual will be expected to (1) lead the development of a nationally recognized research program involving all disciplines in the department; (2) develop and sustain high-quality academically oriented diagnostic services in the Veterinary Medical Teaching Hospital including anatomic pathology, surgical pathology, microbiology, and parasitology; (3) provide close liaison between the Department of Pathobiology and the scientific community of the Health Science Center, Institute of Food and Agricultural Sciences, and the State of Florida at large.

Letters of application or nomination should include a curriculum vitae, names of three persons who can provide letters of reference, and a statement of career goals. The deadline for receiving applications is December 1, 1998, or until filled. All correspondence should be addressed to:

**Dr. Eleanor Green  
Search Committee Chair  
College of Veterinary Medicine  
University of Florida  
P.O. Box 100136  
Gainesville, FL 32610-0125  
Telephone: 352-392-4700, ext. 5600**

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

Biology. Molecular/cell biology. North Central College invites applications from broadly trained Molecular/Cell Biologists for a tenure-track appointment as **ASSISTANT or ASSOCIATE PROFESSOR**, to begin September 1999. Ph.D. required; postdoctoral experience preferred. Applicants should have a strong commitment to excellence in undergraduate teaching and research. Teaching assignments include courses in cell biology and molecular biology. Additionally, the successful candidate will participate in our introductory biology sequence and direct undergraduate students in research. North Central College, located 30 miles west of Chicago in Illinois' research and development corridor, is a 137-year-old comprehensive liberal arts college of 2,500 students with a strong tradition in biology. For more details call: **Peggy Lang, Telephone: 630-637-5181; e-mail: mell@noctrl.edu**. Send letter of application, curriculum vitae, outline of undergraduate research plans, graduate and undergraduate transcripts, and have three letters of recommendation sent to: **Dr. Terrence Marsh, Search Committee Chair, c/o Academic Affairs Office, North Central College, P.O. Box 3063, Naperville, IL 60566-7063**. Review of applications begins December 2, 1998, and continues until the position is filled. For more information see [website: http://www.noctrl.edu/acad/majors/biology/biohome.htm](http://www.noctrl.edu/acad/majors/biology/biohome.htm). *We encourage applications from women and minority candidates. Equal Opportunity Employer.*

### PHYSICAL CHEMISTRY VASSAR COLLEGE

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** to begin August 1999. Teaching responsibilities include general chemistry, physical chemistry, and, possibly, analytical chemistry. Establishing a research program suitable for undergraduates is required. Preference will be given to individuals whose research interests lie at the interface of biology and physical chemistry.

Vassar is a highly selective, coeducational, liberal arts college offering an ACS-certified chemistry degree and a biochemistry degree in modern, well-equipped facilities. Please send a curriculum vitae, a synopsis of research plans, a statement of teaching philosophy, three letters of recommendation, and undergraduate and graduate transcripts by November 15, 1998, to: **Marianne H. Begemann, Department of Chemistry, Vassar College Box 406, 124 Raymond Avenue, Poughkeepsie, NY 12604-0406**. *Vassar College is an Affirmative Action/Equal Opportunity Employer.*

Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia invites applications for the Chief of the Vector Genetics Section within the Entomology Branch, Division of Parasitic Diseases, Centers for Disease Control and Prevention.

The Division of Parasitic Diseases is seeking a medical entomologist with a background in vector genetics and field research with an emphasis on malaria. Responsibilities include supervising Section personnel, developing and coordinating Section programs, and conducting independent laboratory and field research assignments on the major vectors of malaria and other arthropod-borne diseases of public health importance. The research assignments will include a) new or improved mosquito and other vector control strategies; b) knowledge of the genetic, immunology, molecular, or biochemical basis of vector-parasite interactions; c) identification and development of molecular markers, tools, or genetic products for future control of the major vectors of malaria or other arthropod-borne diseases; and d) the biology of the arthropod vectors. Other duties include providing technical services to county, state, federal, and international vector abatement and public health agencies in the investigation and control of vector-borne diseases. Coordination and collaboration with scientists and/or technicians within the agency, outside the employee's work unit, and at various organizational levels, scientists in other disciplines or research areas, scientists engaged in directing the agency (as in policy formulation, program funding), and scientists and administrators at other institutions involved on joint projects. The incumbent assists the Branch chief and serves as acting chief, as needed.

Candidates must meet the basic qualification requirements for the GS-14 level of the civil service General Schedule; have an earned doctoral-level degree in medicine, microbiology, epidemiology, or in a related field; and have an in-depth knowledge of the concepts and principals of medical entomology, vector biology, and epidemiology, and a mastery of the techniques and approaches using genetics, molecular biology, biochemistry, and immunology. Depending on qualifications, the annual salary range is \$65,466 to \$85,104. For further information contact: **Robert A. Wirtz, Ph.D., Chief, Entomology Branch, DPD, NCID, CDC, 770-488-4240.** Candidates are invited to send, in confidence, a CV and names of three professional references (please reference the EB/DPD/NCID position) to: **Janie Oddy, Human Resources Management Office, Mailstop C-19, Centers for Disease Control and Prevention, 1600 Clifton Road, Atlanta, GA 30333. Telephone, 770-488-1905, or send it through E-mail at [jlo0@opshrmoe.cdc.gov](mailto:jlo0@opshrmoe.cdc.gov).** This is a critical-sensitive position requiring an investigation and drug test for security clearance. *CDC is an Equal Opportunity Employer and provides a smoke-free environment.*

**FACULTY POSITIONS  
(RANK OPEN)  
DEPARTMENT OF MATERIALS  
SCIENCE AND ENGINEERING  
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. Applicants for junior positions 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, 1999, or earlier. All applicants are asked to provide a professional curriculum vitae including teaching experience and interests, 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, e-mail, and telephone numbers of at least three (3) references. To ensure full consideration, applications must be received prior to January 31, 1999. 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 St.  
Urbana, IL 61801  
Telephone: (217) 333-1440  
Fax: (217) 333-2736  
E-mail: [mse@uiuc.edu](mailto:mse@uiuc.edu)**

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

**National Institutes of Health  
National Institute on Deafness and Other Communication Disorders  
Bethesda, Maryland**

**DIRECTOR, DIVISION OF EXTRAMURAL RESEARCH, NIDCD**

Opening Date: October 1, 1998 Closing Date: November 20, 1998  
(All applications must be post-marked by the closing date.)

The National Institute on Deafness and Other Communication Disorders (NIDCD) is recruiting for the position of Director, Division of Extramural Research. The incumbent will plan, direct and provide leadership for all of the Institute's extramural research and research training activities. Incumbent will have responsibility for the development, dissemination and implementation of extramural review and management policies for the Institute and will pursue program goals through both the grants and contracts mechanisms. The incumbent is assigned full responsibility for the development and operations of the extramural research programs of the Institute. Incumbent prepares budget and personnel plans, allocates resources and signs documents for financial and other commitments of the Institute with authority delegated by the Director, NIDCD. Identifies the major extramural research and training programmatic strategic issues, and serves as the principal advisor to the Director and NIH leadership regarding the Institute's programmatic extramural activities.

This is a Civil Service position in the Senior Executive Service (SES), with salary currently from \$106,412 to \$125,900 including locality pay per year depending on qualifications. Also, a recruitment bonus of up to 25% may be available to a non-Federal applicant selected for this position, subject to individual approval. A relocation bonus of up to 25% may be available to a permanent Federal employee who must relocate to accept this position, subject to individual approval. Alternatively, applicants may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service. The SES individual selected, if not presently in the Senior Executive Service, must serve a one-year probationary period.

Further information about the position and qualification requirements may be obtained from <http://helix.nih.gov.8001/jobs> or by contacting Ms. Christine Clements at (301) 402-0508. Applicants are required to submit a Curriculum Vitae, Application for Federal Employment (SF-171), Optional Application for Federal Employment (OF-612), Resume, or any other written format to: Ms. Christine A. Clements, Personnel Officer, NIDCD, National Institutes of Health, 31 Center Drive, MSC 2320, Bethesda, Maryland 20892-2320. E-mail address: [clements@nidcd.nih.gov](mailto:clements@nidcd.nih.gov)

Additional information may be obtained from: Dr. Robert Baughman, Chairperson, Search Committee for the Director, Division of Extramural Research, NIDCD, (310) 496-5745 or e-mail: [baughman@ninds.nih.gov](mailto:baughman@ninds.nih.gov)

NIH is an Equal Opportunity Employer

Gamera Bioscience is a growing start-up company and the originator of the LabCD™ System, a compact disc-based technology that integrates microfluidics with informatics. We have the following new positions available.

**SENIOR SCIENTIST - Cell Biology  
SENIOR SCIENTIST - Nucleic Acids**

Both positions will work to accelerate development of Gamera's LabCD™ platform. You will be involved in defining the in-house research programs in your respective areas, including identifying appropriate capital resources and staffing; actively working in the laboratory; and interfacing with consultants and external researchers.

The **Nucleic Acids Senior Scientist** will provide expertise and leadership in nucleic acid sample preparation, amplification, and detection. The successful candidate will have a Ph.D. in the Life Sciences with 1+ years of postdoc or industry experience in nucleic acids. A proven track record in the development of nucleic acid technology, especially PCR, is a strong plus. You should have experience in the instrumentation required to develop nucleic acid technology, including computer software and fluorescence detection. **Job Code NA.**

The **Cell Biology Senior Scientist** will provide expertise and leadership in the development and automation of cell-based assays for clinical diagnostics. You will be responsible for establishing a cell culture facility, specifying, acquiring and installing instrumentation for cell-based assays and selection and validation of assays. The successful candidate will have a Ph.D. in Biology or Physiology with 2+ years of postdoc experience in the development of cell-based assays. Experience in cell-based assays for high throughput screening a plus. You should also have experience in the use of advanced microscopy techniques, and cell separation using affinity methods. **Job Code CB.**

These positions offer high growth in a challenging, team oriented, dynamic environment. We also offer a comprehensive benefits package, competitive salary and stock options. Indicate Job Code in cover letter.

**Gamera Bioscience,  
200 Boston Avenue,  
Medford, MA 02155.  
Attn: Human Resources.  
Visit our web site at  
[www.gamerabioscience.com](http://www.gamerabioscience.com).  
No phone calls please.  
Equal Opportunity Employer.**





## POSITIONS OPEN

### PHYSIOLOGIST/ANATOMIST

The Department of Biological Sciences at California Polytechnic State University, San Luis Obispo, is seeking applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level available September 1999. Salary is commensurate with qualifications and experience. Primary teaching responsibilities will be in human anatomy/physiology (including cadaver anatomy) and upper-division physiology courses. Applicants should have research experience in cellular physiology, such as electrophysiology. Other duties will include student advising and directing students in undergraduate and graduate (M.S. level) research. Applicants must have a Ph.D. at time of hiring. A strong commitment to teaching and to productive professional development are essential.

To obtain an application refer to recruitment code 93008 and send a letter of interest to: **Dr. V. L. Holland, Chair, Biological Sciences Department, California Polytechnic State University, San Luis Obispo, CA 93407.**

Applicant files must be completed by November 15, 1998. A completed file will contain the following: (1) application form; (2) curriculum vitae; (3) statement of interest with respect to teaching and research; (4) three letters of recommendation (submitted directly by references); (5) official graduate transcripts. All materials are to be sent to the address above. Refer to recruitment code 93008 in all correspondence.

*Cal Poly is strongly committed to achieving excellence through cultural diversity. The university actively encourages applications and nominations of women, persons of color, applicants with disability, and members of other underrepresented groups. Affirmative Action/Equal Employment Opportunity.*

### ASSISTANT PROFESSOR BIOLOGY/ECOLOGY OF FUNGI

The Division of Biology at Kansas State University invites applications for a tenure-track faculty position at the Assistant Professor level. We seek an individual who uses modern approaches to address fundamental questions in fungal ecology, plant-mycorrhizal fungi interactions, rhizosphere processes, or other aspect of the biology of fungi. The successful candidate will be expected to develop a strong, extramurally funded research program, to participate in undergraduate teaching (organismic biology, biology of fungi), and to teach a graduate-level course in his/her area of expertise. A Ph.D. or equivalent and postdoctoral training are required and teaching experience is desirable. A competitive start-up package is available. In addition, excellent opportunities exist for collaboration with strong established programs in ecology, microbiology, and plant pathology, as well as participation in the Konza Prairie Long-Term Ecological Research (LTER) Program in grassland ecology. Further information about the Division and this position can be found at **website: <http://www.ksu.edu/biology>**. Applicants should submit a curriculum vitae, a statement of research interests, and have three letters of reference sent to: **Dr. David Hartnett, Chair, Mycology Search Committee, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506-4901.** Review of applications will begin on 6 November 1998. *KSU is an Equal Opportunity/Affirmative Action Employer and actively seeks diversity among its employees.*

### ASSISTANT PROFESSOR NEUROPHYSIOLOGY

The Department of Biological Sciences at Louisiana State University (LSU) invites applications for a tenure-track position at the Assistant Professor level. The department is seeking an individual who uses contemporary cellular approaches to study nervous/sensory system function. Candidates must possess a Ph.D. degree or equivalent and have postdoctoral experience. The successful candidate will be expected to maintain a strong extramurally supported research program and supervise the research of graduate students. Teaching responsibility will be one vertebrate physiology course per semester or equivalent. Review of applications will begin on October 26, 1998, and continue until a suitable candidate is identified. Send curriculum vitae, statement of research plans, teaching interests, and three letters of recommendation to: **Neurophysiology Search Committee, Ref. Log #353, Department of Biological Sciences, 508 Life Science Building, Louisiana State University, Baton Rouge, LA 70803.** E-mail applications will not be accepted. Visit our **website: <http://www.chem.lsu.edu/~biosci>**.

*LSU is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Plant quantitative genetics/statistical genomics, 12-month, tenure-track position with a 80 percent research/20 percent teaching appointment in the Department of Agronomy. The research component will utilize quantitative genetics and statistical genomics approaches to improve basic understanding of genes and gene complexes that control quantitative traits of agronomic importance in crop plants and improve selection efficiency with primary emphasis on maize. Other crop species and model systems can be used as appropriate. Teaching responsibilities include instruction of graduate-level courses on quantitative and population genetics and advising graduate student thesis research. Teaching may also involve development and delivery of a distance education course module on the application of statistical genomics to crop improvement. Requires a Ph.D. in plant genetics or related field, strong academic background in biometrics, research experience in quantitative genetics or statistical genomics, ability to publish original research on research publications in refereed journals, and ability to supervise graduate student thesis research. A letter of application, résumé, statement of goals and interests related to position, and transcripts must be received by November 15, 1998, for the first round of selection. Arrange to have three letters of reference sent by that date. The search will continue until a suitable candidate is identified or the search is closed. Apply to: **Dr. Kenneth G. Cassman, Head, Agronomy, University of Nebraska-Lincoln, P.O. Box 830915, Lincoln, NE 68583-0915.** E-mail: [agro107@unlvm.unl.edu](mailto:agro107@unlvm.unl.edu). More information about the Department and the position can be found at **website: <http://ianrwww.unl.edu/ianr/agronomy/>**. UNL is committed to a pluralistic campus community through Affirmative Action/Equal Opportunity, is responsive to the needs of dual career couples, and assures reasonable accommodation under the Americans with Disabilities Act. Contact: **Dr. Cassman, Telephone: 402-472-1555.**

**ASSISTANT PROFESSOR** of biology, two positions. Mesa State College invites applications for two tenure-track positions in biology at the Assistant Professor level, beginning August 1999. A Ph.D. is required. (i) **CELLULAR BIOLOGIST/MICROSCOPIST** to teach lower-division general biology courses and upper-division courses within their specialty. Preference will be given candidates who are broadly trained and have experience with electron microscopy (TEM and SEM), immunofluorescence, and other labeling techniques. (ii) **ZOOLOGIST** to teach general zoology and an upper-division course within their specialty. Both Invertebrate and Vertebrate Zoologists are encouraged to apply. Successful candidates are expected to teach 12 credit hours per semester, offer research opportunities for undergraduates, and seek external funding. To apply send a letter of application, curriculum vitae, statement of teaching philosophy, research interests, undergraduate and graduate transcripts (unofficial), and three letters of recommendation to: **Cell Biology Search or Zoology Search, c/o Dr. Robert E. Kribel, Dean, School of Natural Sciences and Mathematics, Mesa State College, P.O. Box 2647, Grand Junction, CO 81502.** The review process will begin November 2, 1998. To learn more about Mesa State College visit our **website: [www.mesastate.edu](http://www.mesastate.edu)**. *Mesa State College is an Affirmative Action/Equal Opportunity Employer.*

### VISION RESEARCH SCIENTISTS

The John A. Moran Eye Center, at the University of Utah Health Sciences Center, seeks outstanding Vision Research Scientists at the **ASSISTANT, ASSOCIATE, and FULL PROFESSOR** level to conduct research focused on retinal diseases as part of the Michael Wynn Center for the Study of Retinal Disease. Applicants should have a strong background in vision science and research interests targeting, for example, the genetics of disease, retinal regeneration, gene therapy, or the physiology of disease processes. Candidates must have an advanced degree in a biomedical science (M.D. and/or Ph.D.) and Fellowship experience. Senior candidates must have an active funded research program. The appointments are tenure-track, with competitive salary, start-up funds, and laboratory space. Interested candidates should forward a curriculum vitae, a statement of research interests and experience, a brief summary of future research, and the names of at least three individuals who may be contacted for letters of recommendation to: **Dr. Eric M. Lasater, Department of Ophthalmology, John A. Moran Eye Center, University of Utah, 50 North Medical Drive, Salt Lake City, UT 84132.** *The University of Utah is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

## POSITIONS OPEN

**PLANT PATHOLOGIST.** Microbial ecology, **ASSISTANT PROFESSOR**, tenure-track, 12-month, 90 percent research, 10 percent teaching, in the Department of Plant Pathology. Available July 1, 1999. Establish a strong, extramurally funded research program centered on the ecology of plant pathogens of one or more of the major crops in Kansas (wheat, corn, sorghum, alfalfa, soybean, forage grasses, or turf grasses). Possible research areas include (1) define interactions of plant pathogens and microbial populations associated with sustainable cropping systems; (2) study the effect of host genotype (including transgenic plants) on these interacting populations; (3) use genetically engineered microbes to manage soil- and/or residue-borne plant pathogens; and/or (4) develop integrated, ecology-based strategies to manage economically important crop diseases. Teach a graduate course in plant disease ecology/epidemiology. Qualifications: Ph.D. and research experience in plant pathology, microbial ecology, microbial population genetics, ecological epidemiology, or a related field; demonstrated excellence in research; ability and desire to teach and to guide graduate students and Postdoctoral Fellows. Preference will be given to candidates with postdoctoral experience, a solid foundation in quantitative microbial ecology, and an interest in soil-borne plant pathosystems. Send application, including transcripts, résumé, copies of relevant publications, and a summary of research interests, and have three letters of reference sent to: **Fred W. Schwenk, Head, Department of Plant Pathology, Throckmorton Hall, Kansas State University, Manhattan, KS 66506-5502.** E-mail: [fws@plantpath.ksu.edu](mailto:fws@plantpath.ksu.edu). Applications will be reviewed beginning January 2, 1999. *Kansas State University is an Equal Opportunity/Affirmative Action Employer.*

### MICROBIOLOGIST

The Department of Biological Sciences at the University of Alabama in Huntsville announces a tenure-track faculty position in microbiology beginning in August 1999. We are recruiting an **ASSISTANT PROFESSOR** able to teach undergraduate and graduate courses in microbiology and related areas. The applicant should be broadly trained in microbiology and possess a Ph.D. in an appropriate area of the discipline. Postdoctoral experience is very desirable. Although the area of research interest is open, individuals with expertise in medical microbiology, immunology, and/or virology are particularly encouraged to apply. The development of a strong, independent research program and the ability to attract extramural funding is required. Ability and willingness to collaborate with the Natural Products Research Group and/or the Laboratory of Structural Biology in microbiological screening/drug design of putative biologically active compounds will be viewed favorably. The successful candidate will be expected to involve undergraduates as well as graduate students in his/her research program. Salary is competitive. Send letter of application, curriculum vitae, statement of teaching and research interests, and four letters of reference to: **Chair, Microbiology Search Committee, Department of Biological Sciences, Wilson Hall, The University of Alabama in Huntsville, Huntsville, AL 35899.** Applications will be accepted through November 30, 1998, with screening beginning soon after publication of this advertisement. *UAH is an Affirmative Action/Equal Opportunity Institution.*

### ASSISTANT PROFESSOR INSECT GENETICIST

The Department of Entomology, University of Kentucky invites applications for a 12-month tenure-track Assistant Professor position with a starting date July 1, 1999. The successful candidate is expected to develop a strong, competitive research program in insect behavioral/population genetics that might address the application of genetic principles to evolutionary studies, behavior, management of insect populations, and/or resistance. Teaching responsibilities will include an undergraduate genetics course, a graduate-level course in his or her specialty and advising graduate students. Applicants must have a Ph.D. in entomology or related biological discipline, significant research accomplishments in behavioral/population genetics, and a commitment to excellence in teaching. Interested individuals should submit a letter of application, a résumé, transcripts, a list of publications (include reprints/preprints), a statement of research/teaching interests, and have four letters of reference sent to: **Dr. B. C. Pass, Chair, Department of Entomology, University of Kentucky, Lexington, KY 40546-0091.** Closing date: January 31, 1999. *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer.*

# SCIENTIFIC DIRECTOR BREAST CANCER PROGRAM

The H. Lee Moffitt Cancer Center and Research Institute, a newly designated NCI Cancer Center at University of South Florida and the Department of Internal Medicine, are seeking a senior level independent investigator to serve at the rank of Associate/Full Professor to direct research in the Cancer Center's Breast Cancer Research Program. This program is part of the Clinical Investigations Program funded by the NCI. Significant resources are available to support this program including academic FTEs in clinical and basic science departments, laboratory space, and a substantial start-up package. The interdisciplinary clinical breast cancer program sees more than 1900 new breast cancer patients per year. Candidates must have an M.D. or M.D./Ph.D., be ABIM certified in Medical Oncology, and have a reputation for conducting peer-reviewed breast cancer research. Academic Rank and Salary Rate dependent upon individual qualifications and scholarly activity. Research areas of particular interest include: molecular oncogenesis, signal transduction pathways, novel treatment approaches, and molecular genetic studies. Interested applicants should send their CV and 1-2 page statement of academic interests by 12/15/98 to **William S. Dalton, M.D., Ph.D., (Associate Center Director for Clinical Investigation), or Kenneth Zuckerman, M.D., (Director, Division of Hematology/Hematology), H. Lee Moffitt Cancer Center, 12902 Magnolia Drive, Tampa, FL 33612.**

Moffitt Cancer Center is an Equal Opportunity Employer  
The University of South Florida is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award degrees at the baccalaureate, master's, specialist and doctoral levels, including the Doctor of Medicine.



H. LEE MOFFITT  
CANCER CENTER  
& RESEARCH INSTITUTE  
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DESIGNATED CANCER CENTER



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For disability accommodations please contact Jody Swanson at (813) 975-7894,  
a minimum of five working days in advance. TDD# (813) 974-2218



## National Institutes of Health National Center For Research Resources

### Associate Director For Research Infrastructure

The National Center for Research Resources invites applications for the position of Associate Director for Research Infrastructure (ADRI), NCRR, NIH. The ADRI is responsible for: (1) directing the Research Infrastructure area and developing and implementing plans to enable NCRR to enhance the effectiveness of the RI programs, while providing scientific leadership in the planning, formulation, program review, development and evaluation of all activities that are encompassed by this area, all of which impact the conduct of biomedical research at the National level; (2) managing programs that address biomedical research faculty and facility-development at a wide range of institutions, including minority institutions; programs designed to improve biomedical research facilities through matching grants for construction and renovation; and programs that enhance science education and skills for K-12 students, their teachers and the lay public. The ADRI integrates these programs into the NIH agenda and establishes priorities for using these programs to achieve NIH's and NCRR's long-range objectives. The Research Infrastructure area currently include the following programs; Research Centers in Minority Institutions, RCMI Clinical Research Infrastructure Initiative, Research Infrastructure in Minority Institutions, Research Facilities Improvement, Animal Facilities Improvement, the Institutional Development Award, and the Science Education Partnership Award.

Applications must have a Doctor of Medicine or a Ph.D. in one of the health sciences (or equivalent combination of experience and training) plus senior level medical/biomedical research experience that demonstrates the following mandatory qualifications: (1) Research-related managerial and research experience which provide the ability to develop, implement, and administer extramural research programs involving shared research resources, institutional and faculty development, as well as research facility development; and (2) extensive knowledge of biomedical research, including current research techniques, kinds of equipment used in biomedical research, and facilities needs for the conduct of state-of-the-art biomedical research in the rapidly changing extramural research community. This is a permanent full-time position with a salary range of \$106,412 to \$125,900 per annum commensurate with qualifications. Physicians may be eligible for a Physician Compatibility Allowance ranging from \$5,000 to \$20,000 per year. A recruitment bonus of up to 25% of base pay may be available to a non-federal selectee for this position. A relocation bonus of up to 25% of base pay (subject to approval) may be available to a permanent Federal employee who must relocate to accept this position. A one year probationary period must be served by the individual selected if not currently or previously in the Senior Executive Service.

Send applications to Ms. Pathenia Wiggins, National Institutes of Health, National Center for Research Resources (NCRR), 9000 Rockville Pike, Building 31, Room 3B43, Bethesda MD 20892. For application forms and a copy of the requirements contact Ms. Wiggins at NCRR on (301) 496-1524. Deadline for applications is November 2.

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

- Applicants with internet access may browse the NIH Home Page to view the full text vacancy announcement at <http://helix.nih.gov:8001/jobs/>
- OPM now requires five executive core qualifications be met by individuals being recommended for appointment to the SES. Information about these qualifications can be requested from the NCRR Personnel Office or found on the Web at <http://www.opm.gov/ses/html.ecq4.htm>
- Applicants may browse the NCRR Home Page at <http://www.ncrr.nih.gov>
- Applicants may e-mail materials to [patw@nih.gov](mailto:patw@nih.gov)

NIH is an Equal Opportunity Employer

## POSITIONS OPEN

### GENETICIST AND INVERTEBRATE BIOLOGIST

Two tenure-track positions at the **ASSISTANT PROFESSOR** level are available at The Department of Biology at the University of North Carolina at Greensboro. One is in the area of genetics, and the other is in invertebrate biology. Applicants should have a Ph.D. and postdoctoral experience with a strong research record. The Department offers competitive start-up funding, and seeks excellence in teaching, research, and service. The successful candidates will be expected to teach genetics or invertebrate zoology, respectively, specialty courses, participate in the Introductory Biology Program, and develop a research program that involves undergraduate and M.S. students.

The Department of Biology consists of 22 full-time faculty members in addition to supporting staff. We offer degrees of B.A. and B.S. with concentrations in biotechnology and in environmental biology, B.S. in medical technology, M.S., and M.Ed. The Department of Biology has approximately 70,000 square feet in laboratories, classrooms, and offices for research and teaching.

For more information, visit our website: <http://www.uncg.edu/bio>. Review of completed applications will begin on November 16, 1998. Send cover letter, curriculum vitae, statements of research and teaching interests, and arrange for three letters of reference to be sent, respectively, to: **Chair, Geneticist Search Committee or Chair, Invertebrate Biologist Search Committee, Department of Biology, University of North Carolina-Greensboro, P.O. Box 26174, Greensboro, NC 27402-6174.**

*Equal Employment Opportunity/Affirmative Action. Women/Minorities/Veterans/Disabled.*

Plant biology. The Department of Biology, Kenyon College, invites applications for a **TENURE-TRACK POSITION** in plant biology. Some preference will be given to research interests in plant development, plant pathology, or plant virology. The successful candidate will teach in the introductory sequence for undergraduates; teach advanced plant biology and other topics in their field of expertise; and advise undergraduate independent research projects. Kenyon provides research start-up support. Applicants should hold a Ph.D. degree and be able to demonstrate both teaching excellence and the potential to maintain research involvement by undergraduates. Statements of teaching and research interest, curriculum vitae, undergraduate and graduate transcripts, and three letters of reference should be sent directly to: **Plant Search Committee, Biology Department, Kenyon College, Gambier, OH 43022. Website: [www.kenyon.edu/depts/biology/welcome.htm](http://www.kenyon.edu/depts/biology/welcome.htm).** Review of applications will begin 26 October 1998.

*An Equal Opportunity Employer. Kenyon affirms the values and goals of diversity; therefore, the applications of minorities and women are especially encouraged.*

The Institute of Molecular Biology and the Department of Chemistry at the University of Oregon seek a tenure-track faculty member using biochemistry, structural or physical biochemical methods to investigate modern problems in biology. Possible research interests include, but are not limited to, macromolecular assemblies, signaling biochemistry, cell biology, the central nervous system, and development. We anticipate filling this position at the **ASSISTANT PROFESSOR** level, although more senior candidates will be considered. Interested persons should forward curriculum vitae and statement of research interests, and have three reference letters sent to: **Frederick W. Dahlquist, Chair, Biochemistry Search Committee, Department of Chemistry, 1253 University of Oregon, Eugene, OR 97403.**

The closing date is November 15, 1998. *The University of Oregon is an Affirmative Action/Equal Opportunity/ADA Institution committed to cultural diversity.*

### UNIVERSITY OF FLORIDA

Seeks an **ASSISTANT/ASSOCIATE PROFESSOR** in the Department of Medicine, Division of Infectious Disease. M.D. or Ph.D. with minimum of four (4) years of postdoctoral experience. This is a tenure-track position with responsibilities that include DNA sequencing, robotics, and small-volume processing. Salary and benefits commensurate with experience. Recruiting deadline October 22, 1998. Anticipated starting date November 26, 1998. Please reply with curriculum vitae to: **Dr. Reuben Ramphal, Professor, Box 100277 JHMHC, Gainesville, FL 32610.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**TENURE-TRACK.** Biochemistry. The Department of Biochemistry at the University of Vermont seeks to fill a full-time (12-month appointment), tenure-track faculty position at **ANY PROFESSORIAL LEVEL**. Applicants with a commitment to graduate/medical student education, collaborative research interactions with University faculty, and a vigorous independent research program are encouraged to apply. Individuals with postdoctoral research experience and an interest in cellular/subcellular processes will be given special consideration. The individual's research must be based upon fundamental biochemical approaches and principles, with an emphasis on using biochemically characterized systems and at least partially purified macromolecular components. Preference will be given to applicants working in one of the following areas: (1) protein processing and trafficking; (2) chromatin structure and remodeling; (3) organelle development; (4) protein-protein interactions in signal transduction processes; or (5) cell motility. The Department, located within the College of Medicine, has strong interactions with allied departments and is an active participant in institutional teaching and research programs in the areas of cancer biology, cell and molecular biology, thrombosis and hemostasis, pulmonary biology, and biotechnology. The 425-acre main campus of the University of Vermont is located beside Lake Champlain, between the New York Adirondack and Vermont Green Mountains, and resides within a community of about 100,000 people. Interested individuals should send a résumé, a description of career goals and research interests, and names of three references to: **Dr. George L. Long, Chairman, Search Committee, Department of Biochemistry, College of Medicine, University of Vermont, Burlington, VT 05405.** The closing date for applications is December 18, 1998. *The University of Vermont is an Affirmative Action/Equal Opportunity Employer. Women and people of diverse racial, ethnic, and cultural backgrounds are encouraged to apply.*

### POSITION IN BIOTECHNOLOGY UNIVERSITY OF TORONTO AT MISSISSAUGA ERINDALE COLLEGE

The Biology Group of the University of Toronto at Mississauga, Erindale College, invites applications for a full-time, tenure-track appointment in biotechnology at the **ASSISTANT PROFESSOR** level starting July 1, 1999. The successful candidate must have a strong background in molecular biology, structural biology, or genomics and will be expected to develop an internationally recognized research program combining basic and applied investigation with active collaboration with industrial partners. Teaching will include participation in graduate and undergraduate courses according to his/her area of specialization. Applicants must have a Ph.D. degree and postdoctoral experience is preferable. Salary will be commensurate with qualifications and experience. Applications, including a curriculum vitae, brief statement of research interests, and three letters of reference, should reach: **Dr. J. B. Anderson, Biotechnology Search Committee, Biology Group, Erindale College, University of Toronto at Mississauga, Mississauga, Ontario L5L 1C6 Canada** by January 15, 1999. *In accordance with Canadian Immigration requirements, this advertisement is directed toward Canadian citizens and permanent residents of Canada. Also, in accordance with its Employment Equity Policy, the University of Toronto encourages applications from qualified women or men, members of visible minorities, aboriginal peoples, and persons with disability.*

### POSITION AVAILABLE IN CARDIOVASCULAR MRI

Massachusetts General Hospital, Department of Radiology seeks an experienced MRI Radiologist to direct a Cardiovascular MRI Program with appointment at the Harvard Medical School. Duties will include the performance and interpretation of MRI studies of the heart and cardiovascular system. Board certification and MRI Fellowship are required. Appointment at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level, depending on qualifications. Please reply with cover letter and three references:

**Thomas J. Brady, M.D.  
Director of Radiology Research  
Massachusetts General Hospital  
Bartlett 703  
55 Fruit Street  
Boston, MA 02114**

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

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Molecular genetics or structural biology. The School of Biological Sciences is beginning its second phase of expansion as a Program of Preeminence within the University of Missouri System. The areas of molecular genetics and structural biology are designated for development within the school in the new 10-year plan. Thirty members have already been appointed to the school's faculty as part of the first phase. This person will become a School of Biological Sciences Career Scholar-Scientist. This unique opportunity for a junior/intermediate-level position is the first in the new cycle of growth designed to attract preeminent young scientists. For this purpose, we have marshaled resources commensurate to the task. We seek an outstanding Investigator with expertise in the area of eukaryotic molecular genetics or structural biology or closely related disciplines including molecular immunology and molecular neurobiology. The successful candidate is expected to develop and expand an externally funded research program with some teaching obligations. A Ph.D. with demonstrated publications and with existing or imminent peer-reviewed, renewable, independent federal grant support preferred. Extremely competitive salary and start-up package available as well as funding to support research unrelated to that already receiving extramural support or to expand a promising new aspect of that project. Submit curriculum vitae, a brief statement of research interest, and the names, addresses, and telephone numbers of four references to: **Career Scholar-Scientist Search, Office of the Dean, School of Biological Sciences, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110.**

*An Affirmative Action/Equal Opportunity Employer.*

**MOLECULAR POPULATION BIOLOGIST.** Tenure-track **ASSISTANT PROFESSOR** position to begin August 1999. We seek an Evolutionary Biologist using molecular techniques to address population-level questions. Teaching responsibilities include an undergraduate course in evolution and participation in team-taught introductory biology. Development of an additional upper-level or graduate course in area of specialty will be expected in the future. Applicants must establish a vigorous research and graduate program. Ph.D. required; postdoctoral experience desirable. Send curriculum vitae, statements of teaching and research interests, selected reprints, a list of relevant coursework, and three letters of reference to: **Dr. Robert Newman, Molecular Population Biologist Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-9019.** Review of applications will begin 2 November 1998. For additional information on our department, consult our website: [http://www.und.edu/dept/biology/undergrad/bio\\_undergrad.html](http://www.und.edu/dept/biology/undergrad/bio_undergrad.html).

*UND is an Affirmative Action Equal Opportunity Employer.*

**ASSISTANT PROFESSOR.** The Department of Chemistry of the University of Louisville invites applications for a tenure-track Assistant Professor to begin August 1999. We are seeking candidates who are developing independent research programs in the field of biophysical chemistry. Teaching within the physical chemistry division is expected. Applicants with interest in theoretical or computational chemistry are welcome. Ph.D. required. Send curriculum vitae and contact information for three references to: **George Pack, Chair, Department of Chemistry, University of Louisville, Louisville, KY 40292.** Evaluation of applications will begin November 1, 1998, and continue until position is filled. Information regarding the department is available at our website: [www.louisville.edu/a-s/chemistry](http://www.louisville.edu/a-s/chemistry) or by Telephone: 502-852-6798. *Women, African Americans, and other minorities are encouraged to apply. Affirmative Action/Equal Opportunity Employer.*

Eckerd College seeks Ph.D. applicants for tenure-track appointment as **ASSISTANT PROFESSOR** of biology beginning fall 1999. In addition to teaching in the major, the development of a research program accessible to undergraduates and occasional participation in the College's interdisciplinary, values-oriented, general education program are required. Teaching will include undergraduate courses in genetics and cell biology with laboratory instruction emphasizing modern molecular approaches in eukaryotes. Applicants should send a letter describing qualifications, curriculum vitae, undergraduate and graduate transcripts, three confidential recommendations, statements describing your teaching and research philosophy, and teaching evaluations by October 30, 1998, to: **Dr. Guy Bradley, Eckerd College, 4200 54th Avenue South, St. Petersburg, FL 33711.**

*Equal Opportunity Employer.*



## Cato Research Ltd. (CRL),

is a contract research organization with locations in Research Triangle Park, NC, Washington, DC, and Montreal, Canada. CRL engages in the planning and execution of regulatory strategy for pharmaceutical and biological product development. Our goal is to assist clients in developing and gaining regulatory approval for products in conventional and cutting-edge therapeutic areas and novel drug delivery technologies.

Our company has exciting non-laboratory opportunities for self-starters with scientific backgrounds who want to learn and grow in a creative environment. These positions require excellent written and verbal communication skills, strong initiative and interpersonal abilities, and sound critical and analytical thinking. Clinical Research positions require an M.D. or Ph.D. with experience in toxicology, pharmacokinetics, infectious disease, immunology, oncology, pharmacology or other biological sciences.

### Clinical Research Scientists

We are seeking individuals with clinical and scientific training to provide leadership in ensuring that client contracts are met. These opportunities require the ability to design, direct, coordinate and manage drug development and regulatory activities. The ideal candidate will have 5-8 years of experience in the pharmaceutical or biotech industry and knowledge of the entire drug development process. All locations.

### Clinical Research Fellows

The Fellows receive training in the scientific, regulatory, medical and financial aspects of pharmaceutical drug development. The ideal candidates will possess a Ph.D. in Biological Sciences and the ability to manage multiple tasks. All locations.

### Pharmaceutical Scientists

These opportunities require the ability to direct, coordinate, and manage complex CMC activities. Knowledge of GMP, IND, NDA, and PAI requirements are essential. These key individuals should have experience in at least 3 of the following areas: biotechnology product development, analytical development, CMC documentation, research QC/QA, regulatory compliance, clinical trial material preparation, or dosage form development. The ideal candidates will have a BS/MS with 5+ years of relevant experience, or a Ph.D. with 3+ years of relevant experience. NC location only.

If you are an excellent communicator and a team player with problem-solving skills, and wish to expand your career, you will find these opportunities challenging and professionally rewarding.

Cato Research Ltd. offers complete salary and benefits packages. For application to all CRL offices, please send your resume, cover letter and writing sample to: **Job 900, Cato Research Ltd., 200 Westpark Corp. Ctr., 4364 S. Alston Ave., Durham, NC 27713-2280.** No phone calls, please. EOE

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**CATO**  
RESEARCH



**National Cancer Institute**  
Office of the Director  
Office of Cancer Information,  
Communication and Education  
Rockville, Maryland

Opening Date: September 14, 1998    Closing Date: December 31, 1998  
Announcement Number: CA-98-1949

## DIRECTOR, OFFICE OF CANCER INFORMATION, COMMUNICATION AND EDUCATION

The Director of the Office of Cancer Information, Communication and Education (OCICE) directs a complex and dynamic National information center. Responsibilities of the OCICE include organizing and disseminating biomedical research and health information using computer databases and web technology; overseeing the operation of editorial boards; responding to cancer inquiries from the public and health professional communities; developing and implementing cancer education programs; promoting public awareness of the NCI's clinical trials program; administering an international licensing program for cancer information products (i.e. PDQ, CANCERLIT and CancerNet) and evaluating the efficacy of OCICE dissemination efforts. The Director has full responsibility for the broad management of OCICE activities.

The Director manages a budget of approximately \$38 million and oversees a staff of approximately 75, working within six distinctive organizational units. Staff include Ph.D./M.D. level science writers, computer professionals, communications and media professionals, and support staff. He/she works closely with NCI leadership to develop a cohesive cancer communication, information and education plan for the Nation. The Director coordinates, directs, and evaluates the NCI's efforts in planning, policy setting, operation and application of national programs as they relate to the communication, information and education activities of the OCICE.

### SALARY BENEFITS

**Senior Executive Service Appointments** - ES-1 to ES-6 (Currently \$106,412 to \$125,900 including locality pay.) A one-time, lump-sum recruitment bonus of up to 25% of base salary may be paid, subject to approval. Total compensation, however, may not exceed the maximum payable amount of \$151,800.

**Other Appointment Mechanisms and Incentives** - May apply in individual circumstances based on experience and expertise with total salary and incentive compensation to be negotiated.

**Benefits** - Health and life insurance options, retirement, savings plans, paid holidays, and vacation and sick leave.

Applications will be accepted from all qualified persons, including PHS Commissioned Corps Officers and individuals with SES reinstatement eligibility. The individual selected, if not presently in the SES, must serve a one-year probationary period.

Applicants must meet the qualifications requirements. Applicants will be further evaluated on the degree to which they possess these requirements. Applicants are strongly encouraged to obtain a copy of the requirements from Ms. Toni McKeown in the Human Resources Management and Consulting Branch, NCI, at (301) 402-2812. Applications/resumes are to be sent to Ms. McKeown at:

**National Cancer Institute (CA-98-1949)**  
**Human Resources Management and**  
**Consulting Branch**  
**6120 Executive Boulevard**  
**EPS/Room 550**  
**Rockville, Maryland 20852-7211**

All applicants will receive consideration without regard to race, color, gender, national origin, age, religion, disability or sexual orientation.

NIH is an Equal Opportunity Employer

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY University of Illinois College of Medicine

Applications and nominations are invited for a tenured/tenure-track faculty position at the level of Assistant or Associate Professor in the area of gene regulation and cell differentiation. All areas of biochemistry and molecular biology will be considered; however, we are especially interested in problems related to gene expression in the context of regulation, development, and medicine. Applicants should have a Ph.D., postdoctoral experience, a strong record of research accomplishments, and demonstrable potential for the development of an independent research program. The Department is one of six basic science departments in the largest College of Medicine in the United States and consists of 15 full-time faculty and 13 joint appointees. In recent years, we have recruited several senior and junior faculty and are most interested in fostering independent research in an environment of interactive collegiality. Applications should include a curriculum vitae, a summary of current and future research plans, and the names, addresses, telephone/FAX numbers of at least three individuals for references. All inquiries will be held in confidence. Review of applications will begin after November 1, 1998. Send applications or nominations to: **Chair, Molecular Biology Search Committee, Department of Biochemistry (M/C 536), University of Illinois College of Medicine, 1819 West Polk Street, Chicago, IL 60612.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### CELL/MOLECULAR BIOLOGIST

The Department of Zoology, University of Oklahoma, has a tenure-track **ASSISTANT PROFESSOR** position beginning in the fall of 1999 for an individual addressing fundamental questions in molecular, cellular, or developmental biology. Teaching responsibilities will be one course per semester, including undergraduate and graduate courses in cell biology, and periodic rotation through other 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. More information is available at [website: http://www.ou.edu/cas/zoology/](http://www.ou.edu/cas/zoology/). Screening begins 11 January 1999 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: **James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019.** *An Equal Opportunity/Affirmative Action Employer. OU has a policy of being responsive to the needs of dual-career couples.*

### ASSISTANT PROFESSOR OF MOLECULAR BIOLOGY

Full-time, tenure-track position. Begins fall term 1999. Teach junior-level genetics course with laboratory and advanced elective in area of specialty. Participate in teaching introductory biology. Conduct active research program involving undergraduates. Ph.D., a commitment to undergraduate education in a liberal arts setting, and strong preparation for teaching genetics from molecular and classical perspectives required. Must have a commitment to continued research in molecular biology with focus on molecular mechanisms in an area such as, but not limited to, cell biology, development, immunology, or microbial genetics. Postdoctoral research and previous undergraduate teaching experience desirable. Submit interest letter, curriculum vitae, a teaching statement (including philosophy, course descriptions, and research interests) and three reference letters by November 2, 1998, to: **Molecular Biology Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407.** *Equal Opportunity Employer/Affirmative Action.*

**ASSISTANT PROFESSOR.** August 1999. Tenure-track position to teach vertebrate functional anatomy, evolution, and general biology. Prior teaching experience preferred; Ph.D. required. Applications, including curriculum vitae, the names of three references, and transcripts, should be submitted to: **Dr. Michael Held, Chair, Biology, Saint Peter's College, 2641 Kennedy Boulevard, Jersey City, NJ 07306.** Application deadline is October 23, 1998. *Saint Peter's College is an Equal Opportunity/Affirmative Action Employer and complies with Title IX of the Education Amendments of 1972 and with Section 504 of the Rehabilitation Act of 1973.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR

The Utah State University Department of Biology seeks to fill a tenure-track Assistant Professor position in animal cell physiology with interests in molecular approaches to understanding inter- or intracellular signaling mechanisms. Special consideration will be given to applicants with interests that complement current faculty research ([website: www.biology.usu.edu](http://www.biology.usu.edu)), such as ion channel structure and function, lipid-mediated signaling, second messenger biology, and transmembrane receptor signaling. The successful candidate is expected to develop a productive research program and contribute to the graduate curriculum, and must be qualified to teach an undergraduate course in animal physiology. Research support from the Utah Agricultural Experiment Station is available. Candidates must have Ph.D. in the biosciences and postdoctoral training. Applicants are requested to submit a curriculum vitae, statements of research and teaching interests and plans, and to have three reference letters sent to: **Dr. Jon Takemoto, Search Committee Chair, Department of Biology, 5305 Old Main Hill, Utah State University, Logan, UT 84322-5305.** Screening of applications will begin November 15, 1998, and continue until a suitable individual is found. *Affirmative Action/Equal Opportunity Employer.*

### NEUROSCIENTIST

The University of South Dakota (USD), School of Medicine seeks a qualified applicant to fill the tenure-track position of **ASSISTANT or ASSOCIATE PROFESSOR**. The position will be in a newly formed interdisciplinary Neuroscience Group within the Division of Basic Biomedical Sciences. Candidates must have a Ph.D., M.D., or equivalent; postdoctoral experience; an active research program in neuroscience; and must show a high potential for external funding. The candidate will be expected to participate in the teaching of neuroscience courses. Rank and salary will be commensurate with qualifications. Please submit a curriculum vitae, a brief statement of research and teaching experience, and names of three references to: **Ms. Carleen McNeely, Neuroscience Search Committee, Division of Basic Biomedical Sciences, University of South Dakota School of Medicine, Vermillion, SD 57069.** Review of applications will begin November 2, 1998, and continue until position is filled. *USD is an Equal Employment Opportunity/Affirmative Action Employer.*

Columbia University Department of Chemical Engineering and Applied Chemistry announces a tenure-track opening to be filled at the **ASSISTANT PROFESSOR** level by September 1999. Doctorate required and postdoctoral experience desirable. Candidates in all research fields will be considered, but special interest will be in the areas of electrochemistry and sensor technologies. Successful candidate is expected to develop research programs that build on existing institutional strengths, are collaborative, and are capable of attracting external funding. Candidates should submit a plan of research and a statement of teaching objectives that demonstrate commitment to undergraduate and graduate education, three letters of recommendation, a curriculum vitae, academic transcripts, and reprints of up to two research papers representing the candidate's principal scientific efforts to date. Reply to: **Nicholas Turro, Cochairman, 812 Mudd Building, Columbia University, MC 4721, 500 West 120th Street, New York, NY 10027** by December 20, 1998. *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT RESEARCH PROFESSOR.** Duties: Develop theories and computer codes to analyze unsteady flows related to aeroelasticity of turbomachinery. Prepare progress reports on work effort. Help prepare proposals for submission to funding agencies. Will use Fortran90 and Unix for data analysis. Requirements: Ph.D. in mechanical or aerospace engineering in the specialized area of unsteady aerodynamics. Two years of experience in computational fluid dynamics, unsteady aerodynamics, and aerodynamics of turbomachinery. Demonstrated ability to design and conduct research as evidenced by publication in the field. Working knowledge of Fortran90 and Unix. Knowledge of advanced linear algebra techniques. Salary: \$34,000 per year. 40 hours. 9:00 to 5:30 p.m. Apply to: **Employment Security Commission, 1105 Briggs Avenue, Durham, NC 27703** or your nearest Job Service Office. Refer to Job Order# NC3004614 DOT code 002.061-026. Must state Social Security Number. State basis for work authorization in the United States.

## POSITIONS OPEN

### THE UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE

The Department of Biochemistry and Molecular Biology invites applications for a tenure-track position at either the **ASSISTANT or ASSOCIATE PROFESSOR** level. Applicants must have a Ph.D. in biochemistry, molecular biology, or a related discipline, relevant postdoctoral experience, an established research record, and must be committed strongly to an academic career in biomedical research and teaching. The Department has a focus on the biochemistry and molecular biology of disease with research interest in gene regulation, genomics, metabolic biochemistry, and protein regulation and function. Based upon its geographical location, the Department has interactions with the Los Alamos National Laboratory, the National Center for Genome Resources, and the Santa Fe Institute. Preference will be given to individuals with extramural grant support who have experience working on the structure and function of proteins and whose research activities complement those of the department or School of Medicine. Salary will be commensurate with experience and qualifications. The application should include a curriculum vitae and description of research interest. Three letters of recommendation should be directly sent to: **Dr. David Vander Jagt, Chair, Faculty Search Committee, c/o Ms. Arlene Martinez, Department of Biochemistry and Molecular Biology, University of New Mexico School of Medicine, Albuquerque, NM 87131-5221** by November 30, 1998. [Website: macbeth.unm.edu/som/bmb/](http://macbeth.unm.edu/som/bmb/). *The University of New Mexico is an Affirmative Action/Equal Opportunity Employer.*

### PROKARYOTIC MICROBIOLOGIST

Tenure-track **ASSISTANT PROFESSOR** position starting August 1999. Ph.D. required. Teaching and postdoctoral research experience preferred. The successful candidate will participate in undergraduate courses in microbiology and cell biology or genetics and contribute to university-wide programs. The appointee will join a biology faculty deeply involved in creating a strong, research-oriented program for upper-class undergraduate students, and will contribute to this effort. Applications are especially encouraged from candidates whose research is focused in the areas of microbial ecology, genetics, and/or physiology of prokaryotes. Please forward a letter of application with curriculum vitae, transcripts, a statement of teaching and research interests, and arrange to have three letters of recommendation sent by October 26, 1998, to: **Dr. Randall L. Fuller, Chair, Department of Biology, Colgate University, Hamilton, NY 13346-1398.** *Colgate University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

### ASSISTANT PROFESSOR ID# 8615

The Department of Psychiatry, Psychiatric Institute, University of Illinois at Chicago (UIC) seeks a full-time tenure-track Assistant Professor in the area of behavioral neuroscience with expertise in rat and monkey models for self-administration of drugs of abuse and a research interest in the mechanism of nicotine or anxiolytic benzodiazepines or ethanol tolerance and dependence. The candidate must have NIH funding. M.D. or Ph.D. required. Send curriculum vitae, summary of current and future research plans, names, addresses, and telephone and FAX numbers of at least three Senior Investigators as reference to: **Professor G. Pandey, c/o Chris Radzom, University of Illinois at Chicago, Department of Psychiatry, 912 South Wood (M/C 913), Chicago, IL 60612.** FAX: 312-413-1128. *UIC is an Affirmative Action/Equal Opportunity Employer.*

The Cardiovascular Division at the University of Pennsylvania invites applications for a non-tenure-track **RESEARCH ASSISTANT PROFESSOR** position in their Molecular Cardiology Program. Applicants must have Ph.D. or M.D.-Ph.D. and two years of postdoctoral experience in a field of developmental biology and molecular biology related to the heart or vascular system. Experience in gene targeting and production of transgenic mice preferred. The successful candidate will be expected to apply for extramural funding. Competitive salary and benefits. Send or FAX curriculum vitae and names of three references to: **Michael Parmacek, M.D., Chief, Cardiovascular Division, Hospital of the University of Pennsylvania, 9123 Founders Pavilion, 3400 Spruce Street, Philadelphia, PA 19104-4283.** FAX: 215-349-8017. *Equal Opportunity/Affirmative Action Employer encouraging women and minority candidates.*

This is an announcement.

## **The Aldo Leopold Leadership Program**

### **Advanced Training in Leadership and Communication for Environmental Scientists**

Nominations and applications are invited for fellowships with the Aldo Leopold Leadership Program. If you are a tenured, academic scientist – committed to environmental outreach activities in the United States – you are encouraged to apply. Administered by Oregon State University on behalf of the Ecological Society of America (ESA), this Program provides professional training for a select group of 60 Fellows willing to assume a leadership role in “translating” environmental science for media representatives, policy makers, and the private sector. Twenty Leopold Fellows per year will be chosen for the next three years. Those chosen will attend 14 days of training and issue-oriented workshops during their first year. Additional meetings will offer outreach and mentoring opportunities among a premier assemblage of environmental scientists. All expenses are paid. Program funding is provided by a grant from the David and Lucile Packard Foundation.

#### **Scheduled Week-Long Training Sessions**

##### **Kah-Nee-Ta Resort**

**Warm Springs Reservation, OR: June 15–21, 1999**

“Being a Leader in the Scientific Community”

“Communicating with the Media”

“Interacting with the Business and Corporate Sectors”

**Washington, DC: September 1999**

“Providing Scientific Input to Policy Decisions”

“Working with Non-Governmental Organizations”

Successful applicants to the Aldo Leopold Leadership Program will be environmental scientists committed to educational outreach, research, and teaching. To apply, submit your CV, three letters of reference, and a statement describing your commitment to these goals to **Dr. Judith Vergun, Aldo Leopold Leadership Program Director, College of Oceanic and Atmospheric Sciences, 326 Strand Hall, Oregon State University, Corvallis, OR 97331-2209.**

**November 1<sup>st</sup>, 1998, is the deadline for application to be among the first group of twenty Fellows.**

For more information, contact Dr. Judith Vergun (541) 737-4684, [vergunj@oce.orst.edu](mailto:vergunj@oce.orst.edu), or Dr. Jane Lubchenco (541) 737-5337, [lubchenj@bcc.orst.edu](mailto:lubchenj@bcc.orst.edu), or visit the Aldo Leopold Leadership Program web site at <http://www.leopold.orst.edu>

#### **Director, Office of Equal Opportunity National Institutes of Health**

The NIH invites applications for the position of Director, Office of Equal Opportunity, NIH, salary range currently \$106,412 - \$125,900. Recruitment or relocation bonus may be available.

The Director, Office of Equal Opportunity: (1) advises the Director, NIH on equal opportunity, civil rights, diversity management and human resource issues impacting the agency's complex and diverse workforce; (2) manages the development/implementation of NIH equal opportunity policies and procedures to effectively identify, correct and prevent complex, systemic equal opportunity problems and resolve issues alleging class or institutional discrimination; (3) serves as strategic partner with top agency officials; (4) establishes networks with professional minority and women's organizations committed to science and medical research; (5) provides conceptual and procedural framework for Civil Rights compliance NIH-wide; (6) identifies and promotes “best practices;” and (7) coordinates the NIH equal opportunity effort through matrix of 24 Equal Employment managers/specialists/counselors within NIH Institutes, and the NIH Diversity Council. Manages the Office of Equal Opportunity and reports to the Director, NIH.

Applicants must possess senior level professional experience in the equal opportunity field that demonstrates the following *mandatory qualifications*: (1) Ability to provide visionary leadership in resolving and preventing complex, systemic equal opportunity problems, civil rights oversight concerns, and diversity management and human resource issues through partnering with and engendering respect from colleagues and officials within the organization and the equal opportunity community; and (2) Ability to manage a multifaceted equal opportunity organization including establishing plans and policies, evaluating programs, developing and presenting budgets, and building and maintaining a culturally diverse staff.

Submit CV or resume, and bibliography. Vacancy announcement should be obtained by calling 301-402-4111 (#OD-96-1079). TDD is 301-402-1970. Mail applications to **NATIONAL INSTITUTES OF HEALTH, OFFICE OF THE DIRECTOR EXECUTIVE OFFICE, ATTN: SUSAN ELDER (SN), BLDG 31/ROOM 1C17, 31 CENTER DR MSC 2264, BETHESDA MD 20892-2264**

Application process questions may be addressed to Susan Elder on 301-435-2162.

- Applicants with access to Internet's World Wide Web may browse NIH Home Page to view announcement and may apply through Web at URL <http://helix.nih.gov:8001/jobs/>
  - Applicants may browse Office of Equal Opportunity Home Page at URL <http://www1.od.nih.gov/ohrm/ceo/default.htm>
  - Applicants may E-Mail materials to [Susan\\_Elder@nih.gov](mailto:Susan_Elder@nih.gov)
- APPLICATIONS MUST BE POSTMARKED OR TRANSMISSIONS RECEIVED NO LATER THAN October 30, 1998. NIH IS AN EQUAL OPPORTUNITY EMPLOYER

National  
Human  
Genome  
Research  
Institute



at the  
National  
Institutes  
of Health

## **Tenure-Track Position in Genome Analysis**

National Human Genome Research Institute (NHGRI)  
National Institutes of Health (NIH)

The intramural program of the National Human Genome Research Institute (NHGRI), the National Institutes of Health (NIH) in Bethesda Maryland, is looking to recruit a tenure-track scientist to direct an independent research program in genome analysis. The successful applicant will become a member of the Genome Technology Branch and will be provided space and resources needed to pursue a vigorous research program in genome mapping and sequencing and/or the development and application of genomic technologies to investigate biological problems.

Candidates must have a Ph.D. and/or M.D. as well as advanced training in genome science, with demonstrable expertise in the areas of bioinformatics, production mapping and sequencing, positional cloning, and/or the analysis of gene function. We are particularly interested in individuals who have expertise in several of these areas and can develop a research program that takes advantage of interactions with the Genome Technology Branch, the various genomics studies within the NIH intramural program, and the recently created NIH Intramural Sequencing Center.

Competitive salary and benefit packages are available. Please forward curriculum vitae and three references to:

Eric D. Green, M.D., Ph.D.  
Chief, Genome Technology Branch  
NIH/NHGRI  
Building 49 Room 2A08  
49 Convent Drive  
Bethesda, MD 20892-4431  
[egreen@nhgri.nih.gov](mailto:egreen@nhgri.nih.gov)

Closing Date: December 1, 1998 -NIH is an equal opportunity employer.

For more information see: <http://www.nhgri.nih.gov/DIR/GTB>





## POSITIONS OPEN

### ASSISTANT PROFESSOR POSITION EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

The Department of Pharmacology at East Carolina University School of Medicine invites applications for a tenure-track Assistant Professor position. Successful applicants are expected to have a minimum of two years of postdoctoral experience, an excellent record of scholarship, and either active research support or the potential to develop and maintain an active, independent research program. Preference will be given to applicants with training and postdoctoral experience in molecular biology and the ability to apply these to the solution of cardiovascular or central nervous system pharmacological problems. Participation in the teaching of medical, allied health, and graduate students is also required. Please send curriculum vitae, statement of research interests, and at least three letters of recommendation to: **Dr. Wallace R. Wooles, Chairman, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858.** Applications will be received until February 1, 1999. *Federal law requires proper documentation of identity and employability at the time of employment. East Carolina University is an Affirmative Action/Equal Opportunity Employer and invites applications from women and minority scientists.*

The University of Kansas Department of Chemistry invites applications for a tenure-track faculty position in experimental physical chemistry at the **ASSISTANT PROFESSOR** level to begin fall semester, 1999. (Exceptional senior-level candidates in any area of physical chemistry may, in some cases, be considered.) Applicants with research areas in biophysical chemistry, environmental chemistry, or materials science are especially encouraged to apply. Applicants must have a Ph.D. in chemistry or related field, as well as a demonstrable commitment to excellence in teaching and research. Postdoctoral experience is preferred.

Applicants should send a curriculum vitae, teaching and research statements, and arrange for the submission of three letters of recommendation. All materials should be sent to: **Prof. Brian B. Laird, Chair, Physical Chemistry Search Committee, Department of Chemistry, University of Kansas, Lawrence, KS 66045.** Review of applications will begin on November 1, 1998, and will continue until the position is filled, with final approval contingent upon budgetary considerations. *Equal Opportunity/Affirmative Action Employer.*

### ANATOMIST

The Department of Anatomy at Mayo Medical School and Mayo Clinic/Foundation is seeking an Anatomist who is qualified to teach gross anatomy, microscopic anatomy, and embryology. Mayo Medical School is the smallest medical school in the United States with only 42 students per class. The candidate will be expected to share equally in the anatomy instruction to medical students, plus conduct review courses for residents. Teaching duties vary during the year, leaving some opportunities for research. The candidate will have access to state-of-the-art facilities and excellent opportunities for collaboration. A Ph.D. or comparable degree is required. Applicants are asked to submit a letter of interest along with their curriculum vitae and the names of three references to: **Stephen Carmichael, Ph.D., Chair, Anatomy Search Committee, Mayo Clinic, Rochester, MN 55905** by 1 November 1998. You may contact Dr. Carmichael at e-mail: [carmichael.stephen@mayo.edu](mailto:carmichael.stephen@mayo.edu). *Mayo Foundation is an Affirmative Action and Equal Opportunity Employer and Educator.*

The Department of Psychology is accepting applications for two **ASSISTANT PROFESSOR** positions in the area of behavioral neuroscience. We seek outstanding researchers and teachers in each area. Successful candidates will be expected to teach undergraduate and graduate courses and will be expected to develop a strong research program and direct graduate research. A Ph.D., or satisfactory progress toward completion of requirements for a doctoral degree is required. Applicants must have demonstrated publications productivity or potential for future publication activity.

Review of applications will begin immediately. Application deadline is January 15, 1999. Applicants should send a cover letter, curriculum vitae, reprints, and three letters of recommendations to: **The Chair of Behavioral Neuroscience Search Committee, Department of Psychology, The University of Texas at Austin, Austin, TX 78712.** *The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### RESEARCH ASSOCIATES

**ELECTRON MICROSCOPE SPECIALIST.** The minimum training for this position is an M.S. degree in a discipline in the basic sciences, and three years of experience in electron microscopy. The Electron Microscope Specialist will have responsibility for the day-to-day operation of the electron microscopy facility and assistance in the preparation of specimen for electron micrographs, maintain the electron microscopes (transmission and scanning), and assist in training and demonstrations of electron microscopy techniques. The specialist will interact with and provide assistance to all biomedical researchers in the basic sciences. The salary is competitive and negotiable. **RESEARCH ASSOCIATE** in molecular biology/biochemistry. A B.S. degree in chemistry or biology (with at least one year of postgraduate laboratory experience) or an M.S. degree in chemistry or biology is required. A knowledge of PCR and tissue culture is preferred. Applications received by October 1, 1998, are assured of consideration. However, applications will be accepted until suitable candidates are identified. Send letter of application and résumé, and have three letters of reference sent to: **Dr. Earl Doomes, Director, Research Centers and Minority Institutions Program, P.O. Box 10933, Southern University, Baton Rouge, LA 70813.**

Two full-time tenure-track positions in chemistry and biology at the **ASSISTANT/ASSOCIATE PROFESSOR** level are available at Florida Atlantic University, Honors College, beginning no later than July 1999. For chemistry, we seek applicants in all areas, particularly those that interface with disciplines such as environmental, materials, medical, pharmaceutical, psychological, and biological sciences. For biology, we seek applicants in all areas, particularly in molecular, cell, and developmental biology. For both positions, the successful candidates will teach introductory and advanced undergraduate courses, and participate in interdisciplinary teaching. The candidates will also establish a research program in which undergraduates participate. Applicants should submit a curriculum vitae, teaching and research plans, and the names, telephone numbers, FAX, and e-mail addresses of three references to: **Chemistry or Biology Search Committee, Ref. S, Honors College, Florida Atlantic University, 3970 RCA Boulevard, Suite 7000, Palm Beach Gardens, FL 33410.** Materials must be postmarked no later than November 5, 1998. Honors College information may be found at website: <http://www.fau.edu/divdept/honcol/honors.htm>. *Women and minorities are encouraged to apply. FAU is an Equal Opportunity/Affirmative Action Institution.*

**BIOLOGIST/EDUCATION SPECIALIST.** Tenure-track **ASSISTANT PROFESSOR** position available August 1999. P.A. secondary education science certification or eligibility for same required. Ph.D. in biology required; area of research interest is open. Will supervise student teachers and teach biology education courses, human anatomy and physiology laboratories, and upper-division courses. Will develop funded research projects involving students. Successful applicant must demonstrate effective communication and teaching by presenting a seminar during on-campus interview. Mail one copy of all university transcripts, proof of certification or eligibility, statements of teaching and research philosophies, curriculum vitae, and three letters of recommendation, all postmarked by December 1, 1998, to: **Dr. Judith Greenamyre, Department of Biology, West Chester University, West Chester, PA 19383.** For more details Telephone: 610-436-1023; e-mail: [jgreenamyre@wcupa.edu](mailto:jgreenamyre@wcupa.edu). *Affirmative Action/Equal Opportunity Employer. Women and minorities are strongly encouraged to apply.*

California Institute of Technology invites applications for a position as **ASSISTANT PROFESSOR** of chemical physics/physical chemistry, including multidisciplinary areas with experimental and/or theoretical emphasis. The initial appointment is four years. Outstanding candidates who have completed their Ph.D. and have a strong commitment to research and teaching excellence are encouraged to apply. Submit by November 15, 1998, curriculum vitae, publication list, a concise description of proposed research, and three letters of recommendation to: **Professor Ahmed Zewail, Chair, Faculty Search Committee, Arthur Amos Noyes Laboratory of Chemical Physics, 127-72, California Institute of Technology, Pasadena, CA 91125.** *The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.*

## POSITIONS OPEN

### UNIVERSITY OF UTAH DEPARTMENT OF BIOCHEMISTRY

A tenure-track position is available for autumn 1999, in the general areas of structural or mechanistic biochemistry. We are looking for strength and originality in the characterization of biological macromolecules and elucidation of their mechanisms of action. Macromolecule crystallography is an area of particular, but not exclusive, interest. Applicants should hold a Doctoral degree and have a strong record of research accomplishment. Preference will be given to applicants at the level of **ASSISTANT PROFESSOR**, but candidates at more **SENIOR** ranks will also be considered. The successful candidate will join an interactive and diverse faculty, and will participate in campus-wide training programs. Send curriculum vitae, a statement of research background and interest, and three letters of recommendation to: **Dr. Dana Carroll, Faculty Search Committee, Department of Biochemistry, University of Utah School of Medicine, Salt Lake City, UT 84132 USA.** Deadline for applications is November 15, 1998; late applications will be considered if an opening is still available. *The University of Utah is an Equal Opportunity/Affirmative Action Employer, and seeks to provide Equal Access to its programs, services, and activities to people with disability.*

### MOLECULAR BIOLOGIST CANCER VACCINE RESEARCH

Corixa Corporation is a biotechnology company dedicated to the development of T cell vaccines and therapies for cancer and infectious diseases. Corixa is seeking a Molecular Biologist to work in the antigen discovery group, focusing on the expression of tumor antigen genes. Experience in eukaryotic and prokaryotic expression systems is required. Position requires a Ph.D. and/or M.D. with a minimum of two to three years of postdoctoral experience. Competitive salary and benefits. Please send curriculum vitae, statement of research interests and experience, and names of three references by November 2, 1998, to: **Corixa Corporation, Attn: 20-0502, 1124 Columbia Street, Suite 200, Seattle, WA 98104.** FAX: 206-754-5715; website: [www.corixa.com](http://www.corixa.com). *An Equal Opportunity Employer.*

### FACULTY POSITION IN MICROBIOLOGY

The University of Mississippi Medical Center invites applications for a tenure-track faculty position at the rank of **ASSISTANT** or **ASSOCIATE PROFESSOR**. It is anticipated that the position will be filled by an individual with a research interest in molecular virology or viral immunology.

Interested individuals should send a curriculum vitae, a statement of research interest, and the names and addresses of three references to: **Dr. L. W. Clem, Department of Microbiology, University of Mississippi Medical Center, Jackson, MS 39216.**

*An Equal Opportunity Employer. Minorities/Females/Disabled/Veterans.*

**CELL BIOLOGIST.** Department of Life/Earth Sciences, Otterbein College. **ASSISTANT PROFESSOR**, full-time tenure-track, beginning September 1, 1999. Ph.D. in cell biology with postdoctoral experience. Candidates should demonstrate a strong commitment to the liberal arts, effective teaching, and the ability to mentor undergraduate students in scholarly research. Teaching responsibilities will include both major and non-major courses. Deadline: November 15, 1998. Send letter of application with teaching philosophy and research interests, curriculum vitae, and three current letters of reference to: **Dr. Patricia A. Frick, VPAA/Academic Dean, Otterbein College, Westerville, OH 43081.** *Affirmative Action/Equal Opportunity Employer. Women and Minorities accepted.*

Three **POSTDOCTORAL POSITIONS** available November 1, 1998, to study (1) molecular steps of metastasis, (2) progression of DCIS to invasive breast cancer. Strong background in molecular biology required and experience with at least some of the following techniques: differential display, RDA, SSH or equivalent subtraction technique, library construction, microcell fusion, phage display, microarray analysis, and protein purification. Possible long-term positions. Send curriculum vitae with names of references to: **Sanford H. Barsky, M.D., Professor of Pathology, Department of Pathology, UCLA School of Medicine, Los Angeles, CA 90024.** E-mail: [sbarsky@ucla.edu](mailto:sbarsky@ucla.edu); FAX: 310-441-1248. *An Equal Opportunity Employer.*

## Research Positions

The Albert Einstein Healthcare Network (AEHN) invites applications from established basic and clinical research investigators to join our research faculty. AEHN is committed to expanding its basic and clinical research activities. The Korman Research Pavilion is an 87,000 square foot research facility with an AAALAC approved animal facility. Joint faculty appointments at Thomas Jefferson University may be possible.

Areas of specific research interest should complement our outstanding clinical services in:

- **Cancer**
- **Cardiology**
- **Geriatrics**
- **Mental Health (including drug and alcohol)**
- **Orthopaedics**
- **Rehabilitation**
- **Transplantation (liver, pancreas, and renal)**
- **Women's and Children's Health**

Interested individuals should submit a curriculum vitae, a statement of their research interests, a history of current research support, and the names of three references to: Elliott C. Kulakowski, PhD., Director, Research and Technology Development, Albert Einstein Healthcare Network, Korman Research Pavilion, Suite 100, 5501 Old York Road, Philadelphia, PA 19141.

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## AWARD



**NATIONAL  
MULTIPLE SCLEROSIS  
SOCIETY**

### THE \$1 MILLION RALPH I. STRAUS AWARD FOR MULTIPLE SCLEROSIS

The **Ralph I. Straus Award for Multiple Sclerosis** from the National Multiple Sclerosis Society will be awarded *"...to that scientist, or those scientists, of any nationality whatsoever, whose published research results in the development of an effective and specific method of preventing or arresting multiple sclerosis in man."*

The award is \$1 million. Recipient(s) will be determined by a special committee appointed by the National Multiple Sclerosis Society.

The award was established by the late Mr. Ralph I. Straus, philanthropist and past president of the National Multiple Sclerosis Society.

For further information contact:  
**Research Programs Department  
National Multiple Sclerosis Society  
733 Third Avenue  
New York, NY 10017-3288**

**NATIONAL  
CANCER  
INSTITUTE**

NATIONAL CANCER INSTITUTE  
DIVISION OF CANCER  
EPIDEMIOLOGY AND GENETICS  
BETHESDA, MARYLAND

## CHIEF, CLINICAL GENETICS BRANCH

The Division of Cancer Epidemiology and Genetics (DCEG), National Cancer Institute (NCI), is seeking candidates for the position of Chief of the Clinical Genetics Branch (CGB). Candidates should be internationally recognized for their expertise, leadership, and collaborative abilities in the area of human cancer genetics.

CGB is one of eight branches and a laboratory within the Division's intramural research program. The CGB (1) integrates clinical observations in an interdisciplinary approach involving epidemiologic, statistical, and laboratory methods to define the role of susceptibility genes in cancer etiology; (2) identifies and characterizes phenotypic manifestations of genetic and familial syndromes predisposing to cancer; (3) counsels high-risk individuals regarding their personal risk of specific cancers; (4) conducts research into the clinical, social psychological, and ethical issues involved in predisposition testing and counseling programs; (5) conducts observational studies and clinical trials to evaluate strategies for the intervention and prevention of hereditary cancer; (6) participates in the cancer genetics training program; and (7) cooperates with national and international organizations to promote research on genetic determinants of cancer.

The Chief plans, manages and directs the activities of the CGB, utilizing intramural resources, contracts, interagency agreements, and multi-disciplinary collaborations. He/she designs, implements and analyzes interdisciplinary studies of cancer-prone individuals and families to achieve the mission of the branch. In addition, the Chief fosters a mentorship program to train clinicians, epidemiologists, allied researchers and health care providers in the skills needed to characterize and counsel individuals and families predisposed to cancer.

Research experience must include extensive interdisciplinary investigations using clinical, epidemiologic, and laboratory approaches toward the identification and characterization of genetic and familial syndromes predisposing to cancer. Candidates must also have satisfactory experience in the administration and management of a research program that is relevant to the Branch's mission. Candidates must hold a medical or other doctoral-level degree in a relevant scientific field. Nonresident aliens must have a valid employment visa.

The annual salary range is commensurate with education and experience. Depending on the hiring mechanism, an individual with an M.D. degree may receive a Physician's Comparability Allowance per annum.

To obtain information on the application procedures and documents required for consideration for this position, please contact Dr. Ruthann Giusti at (301) 496-1611, FAX: (301) 402-3256 or e-mail her at: [giustir@epndce.nci.nih.gov](mailto:giustir@epndce.nci.nih.gov)

NIH is an Equal Opportunity Employer

## POSITIONS OPEN

### CHEMISTRY SYSTEMS MANAGER HARVARD MEDICAL SCHOOL

The new Institute of Chemistry and Cell Biology at Harvard Medical School seeks a UNIX Systems Manager with a background in chemistry. This is a varied and challenging position, requiring good communications skills, a demonstrated interest in science, and a proactive attitude toward enhancing the interaction between researchers and computers.

The successful candidate will start from scratch to develop a Unix-based network to support the work of the Institute. Responsibilities will include facilitating the acquisition and management of data from multiple instruments with varied operating systems (NMR, LC-MS, Deltavision microscope), working with consultants to set up Oracle databases to integrate chemical and biological information from many sources, and facilitating "data mining" to provide insight into structure-activity relationships. Responsibilities also include system administration, installation and support of desktop machines, World Wide Web-server maintenance, software identification and licensing, and training students and researchers in software applications, including graphics.

A broad background with at least two years of experience configuring and troubleshooting hardware, OS, software, network protocols on PC, UNIX, and Macintosh platforms in multiprotocol environment, combined with one to two years of UNIX system administration experience is required. M.A. or Ph.D. in organic chemistry or related subject, with demonstrated interest in bioinformatics/chemoinformatics, preferred.

Please send a résumé and cover letter to the attention of: **Beth Schaefer**, e-mail: [resume@warren.med.harvard.edu](mailto:resume@warren.med.harvard.edu); FAX: 617-432-3280. We are an Equal Opportunity Employer.

### POSITIONS IN TOMATO GENOME ANALYSIS

**POSTDOCTORAL and GRADUATE STUDENTS.** Multiple positions are immediately available for participation in a multi-institutional effort on tomato genomics. Research will be conducted at Cornell, the Boyce Thompson Institute, and Texas A&M, and in collaboration with The Institute for Genome Research (TIGR). Objectives include development of tomato DNA chips (BTI, TAM), genome-wide expression analysis during fruit development (TAM, C) and in response to pathogens (BTI), and tomato-*Arabidopsis* synteny analysis (C). Competitive salary and benefits packages included. Inquiries should be directed to one of the following: **Steve Tanksley**, Plant Breeding, Cornell University, Ithaca, NY 14853. E-mail: [sdr4@cornell.edu](mailto:sdr4@cornell.edu). **Greg Martin**, Boyce Thompson Institute, Cornell University, Ithaca, NY 14853. E-mail: [gbm7@cornell.edu](mailto:gbm7@cornell.edu). **Jim Giovannoni**, Crop Biotechnology Center, Texas A&M University, College Station, TX 77843-2133. E-mail: [jgg@unix.tamu.edu](mailto:jgg@unix.tamu.edu).

**SENIOR STAFF SCIENTIST.** Bioinformatics. A Ph.D. with expertise and experience in bioinformatics is sought for an immediately available opening. The position will coordinate multi-institutional collection, analysis, and dissemination of genomics information related to identity and expression of tomato ESTs and physical-genetic relationships between tomato and *Arabidopsis*. Salary will be commensurate with experience and highly competitive. Inquiries should be directed to **Steve Tanksley** at the above address. All units involved are Equal Opportunity Employers and women and minorities are especially encouraged to apply.

### POSTDOCTORAL POSITION

The Division of Vaccine Research in the Institute of Human Virology has a Postdoctoral position available immediately for an outstanding individual who has obtained the degree of Ph.D. or equivalent in bacterial pathogenesis. The incumbent will join a team of highly motivated and experienced Molecular Biologists and Immunologists to conduct basic research on the pathogenesis of *Salmonella enterica*. Applications should arrive by no later than October 14, 1998, and should contain a brief letter outlining the applicant's research interests, a current curriculum vitae, and three letters of reference from qualified referees. Applications sent by mail should be addressed to: **Dr. David Hone**, Institute of Human Virology, Medical Biotechnology Center, 725 West Lombard Street, Baltimore, MD 21201 USA. Applications can also be sent by e-mail: [honest@umbi.umd.edu](mailto:honest@umbi.umd.edu). UMBI is an Equal Employment Opportunity/Affirmative Action Employer. Women, minorities, veterans, and applicants with disability are encouraged to apply.

## POSITIONS OPEN

### ENVIRONMENTAL SOCIAL SCIENTIST

Yale University's School of Forestry and Environmental Studies seeks a junior-level Social Scientist, demonstrating a potential for international leadership, for a ladder faculty position. Candidates are desired who (1) have a record of innovative, problem-oriented scholarship on the contemporary relationship between social organization and the physical environment, (2) combine in-depth experience on particular questions regarding society and environment with broad-based conceptual skills and intellectual interests that offer the capacity to operate at multiple scales, and (3) demonstrate an ability to work with colleagues from other disciplines, in particular from the natural sciences. Possible areas of research include, but are not limited to, (1) community-based management of natural resources and protected areas, (2) environmental institutions, organizations, and movements, and (3) social equity and environmental conservation. Innovative approaches to methodology, and the linkage of theoretical and policy-oriented concerns are highly desirable. Geographic focus is open but the capacity to conduct research both domestically and internationally is especially desirable. Candidates must demonstrate capacity for excellence in teaching and advising Master's and Doctoral students with diverse theoretical, topical, and geographic interests, and with both professional and academic career paths. Candidates may apply from a multitude of social science disciplines, but they must demonstrate both clear expertise within one of these disciplines and a capacity for interdisciplinary research and teaching. The appointment will be made at the level of **ASSISTANT or ASSOCIATE PROFESSOR** (with term).

Applicants should send a curriculum vitae, statement of research and teaching interests, two reprints or other professional publications, and a list of three references to: **Professor Michael R. Dove**, Chair, Environmental Social Scientist, Yale University School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511 USA. Telephone: 203-432-3463; FAX: 203-432-3817; e-mail: [michael.dove@yale.edu](mailto:michael.dove@yale.edu).

Deadline for submission of applications is December 1, 1998.

Yale University is an Equal Opportunity Employer, and women and minority candidates are especially encouraged to apply.

**ELECTRON MICROSCOPIST** needed in Laboratory of Biological Ultrastructure, Joint Institute of Food Safety and Applied Nutrition, University of Maryland at College Park/Center for Food Safety and Applied Nutrition, Food and Drug Administration. Specific duties include all aspects and stages of basic TEM/SEM specimen preparation, fixation, dehydration, critical point drying, infiltration, polymerization of basic epoxy-type, or LR White resins. Thin sectioning, staining, and darkroom skills are essential. Must have sufficient independence to align and maintain TEM/SEMs and must be comfortable in providing support to wide range of users. Knowledge and experience using immunolabelling procedures and cryosectioning preferred. To obtain a copy of the vacancy announcement and information about documentation that must be submitted for consideration by October 24, 1998, please contact: **Ronzell Pettaway**, Telephone: 202-205-5097 or call FAX-back number at Telephone: 301-827-4287 and request vacancy announcement# FDA 8607, or access FDA website: <http://www.fda.gov> (click on "index" and "job openings"). FDA is an Equal Opportunity Employer.

### PLANT MOLECULAR BIOLOGIST FORAGE GENETICS

Leading forage breeding company seeks Plant Molecular Biologist to help build a world-class alfalfa genetic engineering program. Postdoctoral experience in transformation and gene expression is required. Must have good communication skills, be able to function as part of an integrated team, and be effective in collaborative relationships.

Molecular biology activities will include design and construction of plasmids, characterization of transformants, and evaluation of gene expression and gene stability. In addition to plant molecular biology activities this person will be part of a team directing program planning/prioritization and the establishment and management of collaborations.

The search will begin November 1, 1998, and continue until a suitable candidate is identified.

Interested candidates should submit a résumé to: **Dr. Mark McCaslin**, Forage Genetics Inc., N5292 Gills Coulee Road, West Salem, WI 54669.

## POSITIONS OPEN

### YORK UNIVERSITY PROFESSORSHIP IN VISUAL SCIENCE

York University and the Ontario Research Development Challenge Fund invite applications for a newly established Professorship in visual science. Applicants should have a strong record of research in biological vision extending over at least 10 years beyond their Ph.D. The appointment could be in one or more of the Departments of Biology, Psychology, and Computer Science.

The York Centre for Vision Research consists of 16 faculty members in psychology, biology, computer science, and philosophy. They conduct psychophysical, physiological, and computational investigations of a broad range of topics including spatial vision, eye-movement, attention, clinical problems, the visual-vestibular system, and machine vision. The Centre has excellent research facilities and strong links with the Centre for Research in Earth and Space Technology, the Hospital for Sick Children, and the Eye Research Institute of Canada.

Enquiries and applications, with a curriculum vitae and the names of three referees, should be sent to: **Ian P. Howard**, Centre for Vision Research, Farquharson Building, York University, 4700 Keele Street, Toronto, Ontario M3J 1P3 Canada. E-mail: [ihoward@hpl.crestech.ca](mailto:ihoward@hpl.crestech.ca); Telephone: 416-736-5659; FAX: 416-736-5857; website: <http://www.yorku.ca/dept/psych/yorkvis>. Review of applications will begin November 1, 1998, and continue until the position is filled.

York University is implementing a policy of Employment Equity, including Affirmative Action for women faculty. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

### POSTDOCTORAL POSITION MOSQUITO MOLECULAR BIOLOGY/ VECTOR-PARASITE INTERACTIONS

A Postdoctoral position is available to use mosquito transgenesis technology to research basic problems in vector/parasite interactions and to contribute to the applied goal of developing parasite-resistant mosquitoes. The successful candidate will be in an interactive environment with a group of scientists who are analyzing the function of promoters of tissue-specific genes and improving transgenesis technology for vector mosquitoes, and a group that is developing molecules that interfere with malaria parasite development in mosquitoes. Work will be conducted in the Department of Molecular Biology and Biochemistry at the University of California, Irvine. A Ph.D. or equivalent degree is required. The position requires an excellent working knowledge of all aspects of molecular biological techniques. Familiarity with mosquito or parasite biology is helpful but not required. Interested candidates should submit a statement of interest and curriculum vitae to: **Dr. Anthony A. James**, Professor, Department of Molecular Biology and Biochemistry, 3205 BioSci II, University of California Irvine, Irvine, CA 92697-3900 by November 15, 1998. Letters of reference will be requested after the initial review of candidates.

### PLANT CELL BIOLOGY/VIROLOGY OREGON STATE UNIVERSITY

**POSTDOCTORAL POSITION** supported by NIH is available to study viral molecular chaperone from HSP70 family. Project integrating cellular and biochemical approaches provides a unique opportunity for highly motivated applicants interested in fundamental mechanisms of virus-cell interaction. Knowledge of molecular biology methods is required; experience in cell biology, fluorescent microscopy, and/or protein purification techniques would be of great advantage. Send curriculum vitae, statement of research experience, and two letters of recommendation to: **Dr. Valerian V. Dolja**, Department of Botany and Center for Gene Research and Biotechnology, Cordley Hall 2082, Oregon State University, Corvallis, OR 97331. FAX: 541-737-3573; e-mail: [doljav@bcc.orst.edu](mailto:doljav@bcc.orst.edu). Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL POSITION** available to study human cytomegalovirus infection in polarized human cells. Project focuses on identification of cellular molecules that bind viral glycoproteins and facilitate virion entry and the spread of infection from cell to cell. Previous research experience in cellular biology and molecular virology required. Interested candidates should submit curriculum vitae and names of three references to: **Dr. Lenore Pereira**, University of California San Francisco, HSW-604, San Francisco, CA 94143-0512.



**RESEARCH PSYCHOLOGIST  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

The U.S. Environmental Protection Agency's (EPA) National Health and Environmental Effects Research Laboratory, Neurotoxicology Division, Neurophysiological Toxicology Branch, in Research Triangle Park, North Carolina, is seeking a Research Psychologist, GS-180-13, to develop a research program on the effects of exposure to environmental pollutants on the limbic system of adult and developing organisms. The ideal candidate will have a Ph.D. and postdoctoral experience; the ability to conduct research on the effects of exposure to environmental agents on the limbic system; training in experimental physiological psychology, neurobiology (or a related field), and neurotoxicology; the ability to communicate research findings orally and in writing; and expertise in the development of conceptual models of neuroplastic processes linking neurophysiological outcomes to relevant behavioral and cellular processes. In addition, experience studying the effects of environmental agents on the nervous system and experience using a variety of *in vitro* and *in vivo* neurophysiological experimental approaches and models is required. The position will be filled at the GS-13 level (\$55,004-\$71,503).

**HOW TO APPLY:** Current or former permanent federal employees may apply through EPA by calling our Jobline at 1-800-433-9633 and requesting the application material for EPA-RTP-98-285. All other applicants must apply through the U.S. Office of Personnel Management (OPM) by calling OPM's automated jobline at 1-919-790-2822 and requesting the application package for AR1884, or by contacting OPM via the Internet at [www.usajobs.opm.gov](http://www.usajobs.opm.gov) and completing the on-line application form. Requests for application packages must be made no later than November 20, 1998.

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**Idun Pharmaceuticals**

Idun Pharmaceuticals is an early stage biopharmaceutical company focused on innovative therapies for controlling cell death.

**Senior Research Scientist** (code P1): Ph.D. in pharmaceuticals, pharmacology, or related field with at least 3 years of post-doctoral experience in development is needed to evaluate the ADME properties of novel drugs, supervise contracts, report to project teams, coordinate efforts of 2-4 scientists, and prepare reports for INDs and NDAs.

**Research Scientist II** (code P2): Ph.D. or M.S. in analytical chemistry or pharmaceuticals is needed to set up analytical methods to identify and quantify tissue levels of novel agents and their metabolites. Must have experience with HPLC/MS and tissue extraction methodologies, and at least 2 years industrial experience.

Idun Pharmaceuticals is an exciting, rapidly growing company with an attractive compensation and benefits package, including equity participation. For confidential consideration, please send your *curriculum vitae* to:

Idun Pharmaceutical  
11085 N. Torrey Pines Road, Suite 300  
La Jolla, CA 92037  
*Equal Opportunity Employer*

# nature biotechnology

## seeks a **SENIOR RESEARCH EDITOR**

*Nature Biotechnology*, based in New York City, seeks a senior research editor. Applicant should have a PhD, postdoctoral experience in either an industrial or an academic laboratory, a distinguished publication record in peer-reviewed journals, a keen critical and analytic sensibility, excellent writing and editing skills, and an appreciation of the history and evolution of molecular biology into biotechnology.

The journal's primary editorial interest is in publishing research that brings biology out of the laboratory and into successful application with clear commercial impact; we also have an editorial interest in the development of new technologies for use in the laboratory. As the journal publishes across a number of disciplines, a willingness and demonstrated ability to learn new fields is a must, as is the ability to interact with leading scientists. Science publishing experience is highly desirable.

Please send a descriptive cover letter (including salary requirements), *curricula vitae*, and references to:  
The Editor, *Nature Biotechnology*,  
345 Park Avenue South, New York NY  
10010-1707. Deadline for submissions  
is October 16. (Fax 212 696 9006;  
e-mail [biotech@natureny.com](mailto:biotech@natureny.com)).



Nature America Inc.

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345 Park Ave. South  
New York, NY 10010

## POSITIONS OPEN

### BULLARD FELLOWSHIPS IN FOREST RESEARCH HARVARD UNIVERSITY

Each year Harvard University awards a limited number of Bullard Fellowships to individuals in biological, social, physical, and political sciences to promote advanced study, research, or integration of subjects pertaining to forested ecosystems. The Fellowships, which include stipends of up to \$30,000, are intended to provide individuals in mid-career with an opportunity to utilize the resources and to interact with personnel in any department within Harvard University in order to develop their own scientific and professional growth. In recent years Bullard Fellows have been associated with the Harvard Forest, Department of Organismic and Evolutionary Biology, and the J. F. Kennedy School of Government and have worked in areas of ecology, forest management, policy, and conservation. Fellowships are available for periods ranging from four months to one year and can begin at any time in the year. Fellowships are not intended for graduate students or recent postdoctoral candidates. Further information may be obtained from: **Committee on the Charles Bullard Fund for Forest Research, Harvard University, Harvard Forest, P.O. Box 68, Petersham, MA 01366 USA.** Annual deadline for applications is February 1. *Applications from international scientists, women, and minorities are encouraged.*

A **POSTDOCTORAL POSITION** is available to study the genetic regulation of angiogenesis. A major emphasis will be on the use of subtraction hybridization techniques to isolate genes important to new vessel formation. Candidates must have experience in mammalian tissue culture and molecular biology, and ideally would have a background in vascular biology and/or development. Minimum salary: \$28,536 per annum. Please send curriculum vitae, a summary of research interests, and the names and telephone numbers of three references by November 2, 1998, to:

**Chris C. W. Hughes, Ph.D.**  
Department of Molecular Biology and Biochemistry  
University of California, Irvine  
Irvine, CA 92697-3900  
FAX: 949-824-8551  
E-mail: [chughes@uci.edu](mailto:chughes@uci.edu)  
Website: <http://darwin.bio.uci.edu/~chughes/>

*UCI is an Equal Opportunity Employer committed to excellence through diversity.*

**POSTDOCTORAL POSITIONS** at the National Cancer Institute (NCI) in cytokine signal transduction, under the direction of **Diana Linnekin, Ph.D.** Candidate sought to study signal transduction mechanisms of hematopoietic growth factors. Work will be directed toward delineating the biochemical and molecular mechanisms of action of stem cell factor, the ligand for the receptor tyrosine kinase c-Kit. We are interested in structure-function studies of c-Kit with a focus on dissecting signal transduction pathways mediating stem cell factor-induced survival, proliferation, and differentiation of hematopoietic progenitor cells. Applicants should have a strong background in molecular and/or cellular biology, be a U.S. citizen or permanent resident, and have less than five years of postdoctoral experience. Send curriculum vitae and correspondence to: **Diana Linnekin, Ph.D., Building 567, Room 226, NCI-Frederick Cancer Research and Development Center, Frederick, MD 21702.** FAX: 301-846-6907; e-mail: [dlinnekin@mail.ncifcrf.gov](mailto:dlinnekin@mail.ncifcrf.gov).

### POSTDOCTORAL POSITIONS

Two NIH-funded Postdoctoral positions are available immediately to study cyclic nucleotide-activated channels. One position involves molecular biological approaches and the other involves electrophysiology and modeling. Please send curriculum vitae, research statement, and three references to: **Jacqueline Tanaka, 327 Levy Building, Department of Pathology, School of Dental Medicine, 4010 Locust Street, University of Pennsylvania, Philadelphia, PA 19104-6002.** Website: <http://athens.dental.upenn.edu/tanaka>.

**POSTDOCTORAL POSITIONS** available immediately to study ligand-gated ion channels in spinal cord sensory neurons. Candidates should have background in neuroscience and experience in patch clamp technique. Send curriculum vitae and names of three references to: **Dr. Jianguo G. Gu, Brain Institute and Oral Surgery Department, University of Florida, Box 100416, Gainesville, FL 32610.** FAX: 352-392-7609; e-mail: [jgu@dental.ufl.edu](mailto:jgu@dental.ufl.edu).

## POSITIONS OPEN



### POSTDOCTORAL POSITION GENETICS/CARCINOGENESIS The University of Texas Medical Branch at Galveston

A Postdoctoral position is available immediately to map genes that control susceptibility to radiation-induced breast cancer and genomic instability in a murine model system. Candidates should have a strong background in molecular techniques. Experience in genetic mapping using simple sequence repeat polymorphisms or quantitative trait analysis is highly desirable. Interested applicants should send their curriculum vitae, a description of their research experience and interests, and names of three references to:

**Robert L. Ullrich, Ph.D.**  
Department of Radiation Oncology, Biology Division  
The University of Texas Medical Branch at Galveston  
301 University Boulevard  
Galveston, TX 77555-0656

*UTMB is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP LYMPHOCYTE SIGNAL TRANSDUCTION

A full-time, temporary, Postdoctoral position is available immediately to investigate the biochemical and physiological mechanisms by which regulator of G protein signaling (RGS) proteins modulate signaling through G protein-coupled receptors such as chemokine receptors (*Nature* 379:742, 1996; *Nature* 383, 1996). Focus will be their roles in lymphocyte function. Applicants should have a M.D. or Ph.D. with less than five years of postdoctoral training. Familiarity with molecular biology and biochemical techniques is required. Please send curriculum vitae/bibliography no later than October 23, 1998, to:

**John H. Kehrl, M.D.**  
B Cell Molecular Immunology Section  
Laboratory of Immune Regulations  
NIAID, NIH  
Building 10, Room 11B08  
10 Center Drive MSC 1876  
Bethesda, MD 20892-1876  
E-mail: [jkerhl@atlas.niaid.nih.gov](mailto:jkerhl@atlas.niaid.nih.gov)  
FAX: 301-402-0070

*NIH is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available fall 1998 to study structure-function relationships among mammalian cytochromes P450. Approaches include heterologous expression, site-directed mutagenesis, biochemical characterization, and molecular modeling. Specific projects involve active-site elucidation of cytochromes P450 2B (*Biochemistry* 36:11697-11706, 1997; *Biochemistry* 37:6679-6688, 1998) and mechanisms of P450 3A4 cooperativity (*J. Biol. Chem.* 272:5396-5402, 1997; *PNAS* 95:6636-6641, 1998). A Ph.D. in biochemistry, molecular biology, pharmacology, or a related field is required. Strong formal and practical training in protein biochemistry, recombinant DNA technology, analytical chemistry, drug metabolism, or molecular modeling of proteins is also required. Salary is competitive and negotiable. Send curriculum vitae and names of three references to: **Dr. James Halpert, Professor and Chairman, Department of Pharmacology and Toxicology, University of Texas Medical Branch at Galveston, Galveston, TX 77555-1031.** *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITION

An NIH-funded Postdoctoral position is available immediately to participate in studies on the regulation of nonerythroid and erythroid heme biosynthesis. Candidate should have experience in cell culture and RNA/DNA analysis techniques. An additional position should also become available in January 1999 to study the X-ray crystal structure of human ferrochelatase in collaboration with **Dr. B.-C. Wang** in this same department.

Interested applicants should send curriculum vitae and the names of three references to:

**Dr. Harry A. Dailey**  
Department of Biochemistry and Molecular Biology  
University of Georgia  
Athens, GA 30602-7229  
E-mail: [hdailey@arches.uga.edu](mailto:hdailey@arches.uga.edu)

## POSITIONS OPEN

### MEMORIAL SLOAN-KETTERING CANCER CENTER DEPARTMENT OF HUMAN GENETICS Molecular and Developmental Biology Laboratory

**POSTDOCTORAL POSITIONS** are available to study (1) the molecular mechanisms underlying acute promyelocytic leukemia (APL) pathogenesis and the normal function of genes involved in the disease (PML, PLZF, NPM, NUPA, RARα) using molecular and cellular systems, as well as animal models generated by gene ablation in mouse ES cells and tissue-specific Cre/loxP recombinase-mediated targeting; (2) the role of PML RING-finger-related genes (HPRR, RFP) in neoplastic transformation.

Applicants should have a Ph.D. and/or M.D. with extensive experience in molecular biology, protein biochemistry, and/or mouse genetics. Send or FAX curriculum vitae and the names of three references to:

**Pier Paolo Pandolfi, M.D., Ph.D.**  
Department of Human Genetics  
Box 110  
Memorial Sloan-Kettering Cancer Center  
1275 York Avenue  
New York, NY 10021  
FAX: 212-717-3374

*MSKCC is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP DIVISION OF HEMATOLOGY BRIGHAM AND WOMEN'S HOSPITAL Harvard Medical School

A position is immediately available to join an NIH-funded project examining eukaryotic oxygen sensing utilizing yeast as a model system. Applicants should have a Ph.D. and experience in molecular biology and/or yeast genetics.

Please send a curriculum vitae and three references including telephone numbers to:

**H. Franklin Bunn, M.D.**  
Brigham and Women's Hospital  
Longwood Medical Research Center 222  
75 Francis Street  
Boston, MA 02115  
FAX: 617-739-0748  
E-mail: [bunn@calvin.bwh.harvard.edu](mailto:bunn@calvin.bwh.harvard.edu)

*Brigham and Women's Hospital is an Equal Opportunity/Affirmative Action Employer.*

**Crop genomics.** A large, multifaceted plant biotechnology group requires additional research workers. We research transgenes, mutants, DNA marker technologies, functional and structural genomics in soybean, corn, and *Arabidopsis*. **POSTDOCTORAL FELLOWSHIPS** and **GRADUATE STUDENT** positions (two to four) in plant biotechnology are available October 15, 1998. Postdoctoral Fellows require a Ph.D. in the plant sciences or related field. Experience with genomic techniques, BACs, arrays, physical mapping, or marker selection are required. Graduate students with an interest in plant molecular biotechnology are encouraged to apply. Salaries will be commensurate with experience. Candidates should submit a letter of application, complete résumé, transcripts, and names of three referees to: **Dr. David A. Lightfoot, Department of Plant, Soil, and General Agriculture, Southern Illinois University at Carbondale, Carbondale, IL 62901-4415.** *SIUC is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL and RESEARCH ASSISTANT** positions are available immediately to characterize protein domains involved in signaling and viral packaging. Candidates must be highly motivated and should have experience in NMR spectroscopy, biophysical techniques to study protein structure and stability, and/or molecular biology. Please send your curriculum vitae including a brief description of research experience, names, e-mail addresses, and telephone numbers of three references to: **Dr. Michael Overduin, C-236, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262.** For more information, please visit our website: [biomol.uchsc.edu](http://biomol.uchsc.edu).

A **POSTDOCTORAL POSITION** is available immediately to study genes related with neurological disease. Experience in molecular biology, genetics, and neuroscience is desirable. Please send curriculum vitae and three reference letters to: **Dr. Zhong Sheng Sun, Research Institute for Children/Louisiana State University Medical School, 520 Elmwood Park Avenue, Suite 160, Harahan, LA 70123.** *LSU-MC is an Affirmative Action/Equal Opportunity Employer.*

## ANNOUNCEMENT



### 1998 FDA Science Forum Biotechnology: Advances, Applications, and Regulatory Challenges

December 8–9, 1998  
Washington Convention Center, Washington, D.C.

The FDA Science Forum will bring FDA scientists together with representatives of industry, academia, government agencies, consumer groups, and the public to discuss the impact of the enormous advances in biotechnology on product development and regulation. Topics will include "biofarming and biopharming" (bioengineered plants and animals as sources of foods and drugs); diagnostics and detection methods; microbial pathogens, antibiotics, and resistance; therapeutic and preventative agents (novel therapies, gene therapy, cell and tissue engineering, vaccines); new models/methods for safety and efficacy assessment; and regulatory challenges. The Forum will feature plenary lectures and focused discussion groups that include FDA, industry, and university leaders in the field. Co-sponsored by FDA, American Association of Pharmaceutical Scientists (AAPS), and FDA Chapter, Sigma Xi.

Registration forms and program information are available at [www.aaps.org/edumet.html](http://www.aaps.org/edumet.html). Please direct questions to [meetings@aaps.org](mailto:meetings@aaps.org), 703-518-8429, or [shomire@bangate.fda.gov](mailto:shomire@bangate.fda.gov), 301-827-3366.



Formerly



ASTRA MERCK

*Astra Pharmaceuticals, L.P. is a newly created company which was formed by joining Astra Merck Inc. and Astra USA. We are a customer-focused, technologically enabled business organization that markets pharmaceutical products to managed care systems and physicians.*

### Medical Information Scientist (Pharmaceutical/Healthcare Industry)

This individual will serve as a technical expert on disease entities, disease management, and the therapeutic profile of Astra Pharmaceuticals products for institutional, Federal and managed care customers. In addition, you will develop and maintain relationships and serve as a communication link with customers in the scientific and healthcare communities.

Candidates should possess an advanced degree in Bio/Life Sciences, Clinical Pharmacy or Pharmacology and a minimum of 3 years experience in the pharmaceutical/healthcare industry. Cardiovascular experience preferred. The ideal candidate should reside along the Philadelphia/Washington, DC corridor. Some travel will be required.

We offer a highly competitive compensation and benefits package. Please send/fax/e-mail resumes to: Astra Pharmaceuticals, L.P., Attn: Human Resources, 725 Chesterbrook Blvd., Wayne, PA 19087. FAX: 610-695-4450. E-Mail: [Recruiter@astramerck.com](mailto:Recruiter@astramerck.com). Equal Opportunity Employer.

## Want to get your foot in the door?

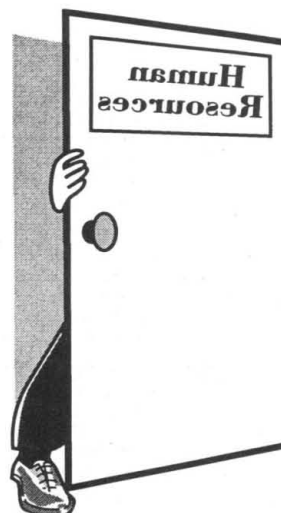
Then let *Science* open some doors for you by attending the **Science Career Fairs**. Science Career Fairs offer the perfect opportunity for scientific professionals to meet in person with representatives from top biotechnology and pharmaceutical companies, universities, governmental agencies, and institutions.

### UPCOMING 1998 SCIENCE CAREER FAIR

Palo Alto, CA at Stanford University  
Tresidder Memorial Union  
23 October: 11 am – 4 pm  
24 October: 11 am – 3 pm

To pre-register post your résumé online in the Résumé Databank on Science Professional Network ([www.scienceonline.org](http://www.scienceonline.org)). Remember to bring multiple copies of your CV or résumé with you to the Career Fair; a copy will be necessary to gain admission to the hall. Admission is FREE.

Do not contact Stanford directly. They are not responsible for organizing this event.



## Science CAREER FAIRS

For more information call (202) 326-7018



## POSITIONS OPEN

### POSTDOCTORAL POSITIONS AT SANDIA NATIONAL LABORATORIES

The Chemical and Radiation Detection Laboratory at Sandia National Laboratories in Livermore, California is a multidisciplinary state-of-the-art facility established to develop advanced sensing methods for trace chemical and biological compounds. By combining Sandia's expertise in chemistry, physics, biology, and engineering, solutions are being developed for environmental, forensic, defense, and public safety needs that face the nation.

Positions are now available for Postdoctoral Associates to work on a nationally significant research program directed at advancing chemical-sensing techniques and bioanalytical technologies. Areas of research include capillary-based chemical separation (electrophoresis, electrochromatography, affinity chromatography, etc.), chemical detection by optical, electrochemical, and mass spectrometric methods, study of microfluidic processes, and development/fabrication of Microscale Total Analytical Systems.

Desirable applicants will have a Ph.D. with a broad-based background and extensive knowledge in one or more of the following areas: chemistry/chemical engineering (analytical, biological/protein, bioanalytical, environmental, physical), separations science, biophysics, biophysical/biomedical engineering, fabrication of microsystems (MEMS), physics, or related disciplines. Creative, self-motivated candidates with excellent academic and research qualifications who enjoy working in a team-oriented environment should submit a résumé, publication list, and reference list to:

**Sandia National Laboratories**  
c/o Anna Isham, MS 9111  
Human Resources Department, CA0047  
P.O. Box 969  
Livermore, CA 94551-0969

*U.S. citizenship is required. Sandia National Laboratories is an Equal Opportunity Employer/Affirmative Action Employer.*

### POSTDOCTORAL POSITION PLANT PHYSIOLOGICAL ECOLOGY/ ECOSYSTEM ECOLOGY

The successful candidate will contribute to a NSF-funded study examining the effects of large herbivores on plant production and N cycling in Yellowstone National Park. Work will include, but not be limited to, using <sup>13</sup>C labeling techniques to understand plant responses to defoliation. The job will require spending a portion of at least one field season in Yellowstone Park.

The position will be available February 1999, and the successful candidate will be required to have completed a Ph.D. in ecology or a related field by the starting date. Experience with plant gas exchange, and soil C and N processes is desirable.

To apply, please send a cover letter outlining research interests and experience, curriculum vitae, reprints, and names, addresses, and e-mail addresses of three references to: **Dr. Doug Frank, Biological Research Laboratories, Syracuse University, Syracuse, NY 13244-1220. E-mail: dafrank@syr.edu.**

Review of applications will begin 9 November 1998.  
*Syracuse University is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION DIVISION OF MOLECULAR MEDICINE COLUMBIA UNIVERSITY

A Postdoctoral position is available in human genomics. The project will utilize mobile element and other genetic markers in investigations of human history and evolution, the history of human genomic DNA, and the biology of mobile elements. Send curriculum vitae to: **Dr. Gary Swergold, Division of Molecular Medicine, Columbia University, 622 West 168th Street, New York, NY 10032.**

*Columbia University takes Affirmative Action toward Equal Employment Opportunity.*

**POSTDOCTORAL POSITIONS** are available at Roswell Park Cancer Institute. (1) To develop novel agents as specific inhibitors of oncogenic gene expression and (2) to study cellular responses to DNA-damaging antitumor drugs that inhibit DNA replication.

Training in molecular biology is preferred. Submit a curriculum vitae and names of three references to: **Dr. Terry Beerman, Pharmacology and Therapeutics Department, Carlton and Elm Streets, Roswell Park Cancer Institute, Buffalo, NY 14263.**

## POSITIONS OPEN

**POSTDOCTORAL TRAINEESHIPS** in toxicology. Biochemical and molecular toxicology, neurotoxicology, immunotoxicology, inhalation toxicology, and reproductive toxicology.

*The EPA funding sources limit awards to U.S. citizens or permanent residents.* All positions require a doctoral degree (usually Ph.D. degree) in the appropriate biomedical science.

Preliminary applications (curriculum vitae, names and addresses of three references) for all positions should be sent to: **David J. Holbrook, Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC 27599-7270. Telephone: 919-966-4685; FAX: 919-966-6357; e-mail: david\_holbrook@unc.edu.** For specific information on the research training, a candidate should contact the Research Advisor for each position.

**Project 3:** The effects of juvenile heptachlor exposure on nervous, immune, and reproductive system function in adult rats. This research program will involve an evaluation of neurotoxicological sequelae of heptachlor exposure. Studies will include neurobehavioral and neuropharmacological assessments of rats following perinatal exposure to heptachlor. Tests will include a variety of behavioral, neurological, and cognitive endpoints, as well as bioassays of nervous system receptor function. The research will address correlations of functional effects with receptor-mediated changes. Experience in behavioral testing and familiarity with handling rats is preferred. Advisor: **Dr. Virginia C. Moser, Neurotoxicology Division (MD-74B), Research Triangle Park, NC 27711. Telephone: 919-541-5075; FAX: 919-541-4849; e-mail: moser.ginger@epamail.epa.gov.**

**Project 4:** Mechanisms of age-related neurotoxicity to anticholinesterase pesticides. For risk assessment, determination if sensitivity in the young can be extrapolated to other anticholinesterase pesticides by biochemical and pharmacokinetic endpoints, such as metabolism by carboxylesterase and phosphotriesterase pathways. Advisor: **Stephanie Padilla, Telephone: 919-541-3956; FAX: 919-541-5024; e-mail: padilla@herl45.herl.epa.gov.**

**Project 5:** Pharmacokinetics of drinking water disinfection by-products (DBP) in pregnant and nonpregnant female rats: dosimetry of brominated DBPs in reproductive target tissues and the role of metabolism in producing adverse reproductive outcomes. Advisor: **Dr. Rex Pegram, Telephone: 919-541-0410; FAX: 919-541-5394; e-mail: pegram.rex@epamail.epa.gov.**

**Project 6:** Trihalomethane pharmacokinetics and pharmacodynamics: rodent to human extrapolation: to compare mechanistic determinants of toxicity and carcinogenicity of brominated trihalomethanes (important drinking water disinfection by-products) in rodents and humans to facilitate interspecies extrapolations for health risk assessments. Advisor: **Dr. Rex Pegram, Telephone: 919-541-0410; FAX: 919-541-5394; e-mail: pegram.rex@epamail.epa.gov.**

**Project 7:** Expression of Th1 and Th2 responses and their role in immunotoxicity, particularly to detecting potential respiratory sensitizers to identify cell surface and intracellular molecules by flow cytometry or molecular biology techniques. Advisor: **Dr. Ralph Smialowicz, Telephone: 919-541-5776; FAX: 919-541-5394; e-mail: smialowicz.ralph@epamail.epa.gov.**

**Project 8:** Other projects in biochemical and molecular toxicology are available. Contact: **Dr. Holbrook.**

### POSTDOCTORAL POSITION UCLA

NIH-funded position available November 1998 to characterize a new chemokine and identify other novel inflammatory mediators by functional genomics. A strong background in molecular/cell biology or immunology/inflammation is essential. Please send a curriculum vitae and names of three references to: **Dr. Jeffrey B. Smith, Department of Pediatrics, UCLA Medical Center B2-325, Los Angeles, CA 90095-1752. E-mail: jbsmith@ucla.edu.**

### POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE IN MOLECULAR BIOLOGY

Basic science laboratory focused on transport across cell membrane has opening with potential growth toward independence. Candidate should have Ph.D. in the life sciences with expertise in advanced techniques of molecular biology. *U.S. citizenship required.* Excellent facilities and research environment, affiliation with UCLA School of Medicine. Salary commensurate with experience. Send curriculum vitae to: **Stanley Rubin, M.D., e-mail: sarubin@ucla.edu; FAX: 818-895-9559.**

## POSITIONS OPEN

### POSTDOCTORAL POSITION MOLECULAR AND CELLULAR BIOLOGY OF MELANOMA

The Southwest Foundation for Biomedical Research has a Postdoctoral Research position available to study the structure, regulation, and expression of genes involved in the initiation and progression of malignant melanoma. An established mammalian model for UV-induced melanoma will be used to examine the molecular and cellular biology of melanoma-associated oncogenes and tumor-suppressor genes, both *in vivo* and *in vitro*. A doctoral-level degree is required and training or experience in molecular biology, cellular biology, and/or cancer biology techniques is preferred. This study is part of an ongoing Kleberg Foundation and NIH-funded program to be carried out in the laboratories of **Dr. Edward Robinson** and **Dr. John McCarrey**. Interested individuals should send a curriculum vitae, brief summary of past and present research interests, and names of three references to: **Director of Human Resources (754), Southwest Foundation for Biomedical Research, P.O. Box 760549, San Antonio, TX 78245-0549. See our website: <http://www.sfbr.org>.**

*Equal Opportunity Employer.*

The University of North Carolina at Wilmington's (UNCW) Center for Marine Science Research, an expanding program with a new 80,000-square-foot laboratory building, invites applications for a **POSTDOCTORAL FELLOWSHIP** in marine science. Any area of marine science will be considered; however, proposed research must complement ongoing research at UNCW. This Fellowship is available for up to two years beginning January 1, 1999, with the second year contingent upon satisfactory progress in Year One. Please send a curriculum vitae, statement of research interests, dissertation title and abstract, official transcript, and three letters of reference to: **Postdoctoral Fellowship Search Committee Chair, University of North Carolina at Wilmington's Center for Marine Science Research, 7205 Wrightsville Avenue, Wilmington, NC 28403. Website: <http://www.uncwil.edu/cmsr/>.** Review of applications will begin November 1, 1998.

*Minorities and women are particularly encouraged to apply. Equal Employment Opportunity/Affirmative Action Employer.*

### CAREER IN OPTOMETRY, OPTOMETRIC RESEARCH, OR TEACHING

The New England College of Optometry offers a unique program for those with a doctorate in the sciences: biology, chemistry, physics, psychology, etc. Candidates have the opportunity to obtain the Doctor of Optometry (O.D.) degree in 27 months. The program begins annually in June. Employment opportunities exist in private practice, industry, education, and research. Contact: **The Admissions Office, New England College of Optometry, 424 Beacon Street, Boston, MA 02115. Telephone: 800-824-5526; e-mail: [admiss@ne-optometry.edu](mailto:admiss@ne-optometry.edu).** Additional information, website: [www.ne-optometry.edu](http://www.ne-optometry.edu).

**POSTDOCTORAL POSITIONS** are available to study the interrelationships between cytokines and receptors in the inflammatory pathway using murine genetics. The epistatic relationships between genes encoding the cytokines and their receptors will be determined using genetic and molecular biological studies on mutant mice that are overexpressors or nulls. Send applications to: **David Hirsh, Department of Biochemistry and Molecular Biophysics, Columbia University, Box 36, 630 West 168th Street, New York, NY 10032. E-mail: [dih1@columbia.edu](mailto:dih1@columbia.edu).**

*Columbia University is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL RESEARCH POSITION

Available immediately with a growth factor/receptor laboratory group to study angiogenesis and the regulation of FGF activity. A strong background in cell and molecular biology is essential. Experience with ECM would be helpful. Send research interests, curriculum vitae, and names of three references to: **Dr. Anne Hanneke, Department of Cell Biology, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037. E-mail: [ahanneke@scripps.edu](mailto:ahanneke@scripps.edu).**

## UNIVERSITY OF CALIFORNIA, SANTA CRUZ EVOLUTIONARY BIOLOGY/ECOLOGY

The biology department at the University of California, Santa Cruz, invites applications for the position of Associate or Full Professor. We seek applicants using theoretical and/or experimental approaches to address questions in Evolutionary Biology, Genetics, or Ecology in any setting (lab or field), system (marine, aquatic, or terrestrial) or taxa. The successful candidate will have an established and active research program. In addition he/she should possess demonstrated leadership abilities and be willing to participate in the continued development of the Organismal Biology program.

UCSC has strong programs in marine and terrestrial ecology, evolution, animal behavior, and marine mammal biology. Many faculty, students, and researchers work locally in the Monterey Bay region, an area of extraordinary marine and terrestrial habitats. All faculty have access to University resources such as the Institute of Marine Sciences, Long Marine Lab, Arboretum and the UC Natural Reserves including Nuevo Island, Landis-Hill Big Creek, Younger Lagoon, Hastings, and Fort Ord. UC Santa Cruz is committed to attracting a premier scientist, and salary and start-up packages will reflect that commitment. Lab space will be provided in a newly constructed research facility located on our 2,000-acre campus in the midst of a spectacular redwood forest overlooking Monterey Bay. In addition to lab space, the University provides substantial common facilities and services, including electron and light microscopy laboratories, greenhouses, vivarium, analytical laboratories, research vessels, constant temperature rooms, and molecular biology laboratories.

**RANK:** Associate to Full Professor.

**MINIMUM QUALIFICATIONS:** In addition to possessing a Ph.D. in Biology or a closely related field, candidates are expected to show evidence of a strong research record that supports appointment at the associate or full professor level and evidence of excellence in teaching.

**POSITION AVAILABLE:** Fall 1999, subject to final budgetary approval

**APPLY TO:** Applications should include a curriculum vitae, three recent publications, a statement of research interests, a statement of teaching interests, and names of contact information for four persons who can provide letters of recommendation. Letters will be solicited only after contact with the candidate. Please send application material to:

**Chair, Evolutionary Biology/Ecology Search Committee**  
**Biology Department**  
**Earth and Marine Sciences Building**  
**University of California**  
**Santa Cruz, CA 95064**

Please refer to position #126 in your reply.

**CLOSING DATE:** Complete applications received prior to December 11, 1998, will receive full consideration.

Inquiries should be directed to **Pete Raimondi (831-459-5674, [raimondi@biology.ucsc.edu](mailto:raimondi@biology.ucsc.edu))**.

Visit the Biology Department Website at <http://www.biology.ucsc.edu>

*UCSC IS AN AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER.  
WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY.*

## BIO SCIENCE SAFETY COORDINATOR

UCI seeks an individual to oversee the development and implementation of school-wide laboratory safety policies and procedures regarding safe operating protocol; hazardous waste minimization; safety training for faculty, staff, visiting scientists and students; laboratory inspections; preparation of safety and environmental compliance records and reports; and emergency response activities.

Requirements include certification as a CSP or in a related field; demonstrated ability to apply principles of occupational health, safety and environmental protection in an academic biochemical laboratory environment; recent experience in and knowledge of federal/state regulatory requirements and standards, including CA Injury and Illness Prevention Program and Cal-OSHA Laboratory Standard; experience developing and implementing policies and procedures, training, information and record-keeping programs; knowledge of and experience with biosafety procedures and controls; and effective communication, interpersonal, and computer skills. Training as a hazardous materials technician and an advanced degree in science are preferred. Apply by 11/4/98.

Please mail resume and cover letter with salary history, referencing Job #SCU-2611K to: UCI Campus Human Resources, Berkeley Place Building, Suite 2500, Irvine, CA 92697-4600. AA/EOE.



## GLOBAL OPPORTUNITIES

### VACANCY

The Basic Science Department at the University of Health Sciences Antigua School of Medicine is seeking qualified individuals for a 4-week Visiting Faculty appointment from **October 21–November 18, 1998**, for Anatomy and Microbiology; **November 23–December 21, 1998**, for Pharmacology; **January 27–February 24, 1999**, for Biochemistry, Immunology, Anatomy, Genetics, Pathology, Microbiology, Biostatistics & Epidemiology; **May 6–June 3, 1999**, for Histology, Behavioral Sciences, Pharmacology, Community Health, Anatomy, Microbiology, Genetics; **August 18–September 15, 1999**, for Anatomy, Immunology, Embryology, Pharmacology, Histology, Genetics, Biostatistics & Epidemiology, and Pathology; **November 22–December 20, 1999**, for Anatomy, Biochemistry, Genetics, Histology, and Embryology.

Applicants must have Ph.D. or M.D. or a combination of both Ph.D. and M.D. with teaching experience in the field.

The salary is US\$4,000.00 for the four-week period with round-trip airfare and accommodation in one of our guest houses at the campus.



Send curriculum vitae to:  
**The Search Committee**  
**UHSA School of Medicine**  
**Dowhill Campus, Picadilly**  
**Box 510, St. John's, Antigua**

**Tel: (268) 460-1391**  
**Fax: (268) 460-1477**  
**E-mail: [fmcp@uhsa.edu.ag](mailto:fmcp@uhsa.edu.ag)**

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIP UTAH STATE UNIVERSITY

Postdoctoral Fellowship available in the Utah State University (USU) Department of Nutrition and Food Sciences to develop biosensors for real-time microbe detection. Responsible for experiments to develop microbial sensors for pathogenic microbes and to investigate microbial physiology related to detection in harsh environments. Ph.D. in microbiology, biochemistry, immunology, or a closely related field required. Expertise regarding immunoassays, microbial physiology, PCR, and ability to work in collaboration is essential. Familiarity with fluid dynamics desired. Submit letter of application, three letters of reference, graduate transcripts, and curriculum vitae to address below by November 1, 1998.

#### PH.D. RESEARCH ASSISTANTSHIPS

Dr. Bart Weimer's laboratory in the Department of Nutrition and Food Science at USU has two Ph.D. Research Assistantships available to study real-time microbe detection. Responsible for experiments to delineate the mechanisms involved in solid-phase capture and detection of microbes and their products. M.S. in microbiology, biochemistry, biology, or a closely related field; admission to USU graduate school; and a minimum GRE score of 1800 is required. Expertise regarding pathogenic bacteria, immunoassays, PCR, and ability to work in collaboration is essential. Familiarity with solid-phase chemistry and optics beneficial. Submit letter of application, statement of interests and goals, two letters of reference, undergraduate and graduate transcripts, and curriculum vitae to address below by November 1, 1998.

Direct questions to: Dr. Bart Weimer, Telephone: 435-797-3356; e-mail: milkbugs@cc.usu.edu.

Application packets should be sent to: Melanie Pond, Utah State University Research Foundation, 1695 North Research Parkway, North Logan, UT 84341. FAX: 435-797-4328; e-mail: mpond@research.usu.edu.

Affirmative Action/Equal Opportunity Employer. Minorities/Females/Disabled/Veterans.

### POSTDOCTORAL POSITIONS IN MOLECULAR MICROBIAL ECOLOGY

Two Postdoctoral positions are available in molecular microbial ecology with focus on gastrointestinal microhabitats and host-microbe interactions. Candidates should have a Ph.D. in microbiology or a related field and experience with recombinant DNA techniques. The Postdoctoral Associates will participate in a collaborative project with Professor Rex Gaskins, Professor Rod Mackie, and Professor Bryan White, Microbiology Program, Department of Animal Sciences at the University of Illinois. Please send an application letter, a curriculum vitae, and the names and addresses of three references to: Dr. H. R. Gaskins, University of Illinois at Urbana-Champaign, 1207 West Gregory Drive, Urbana, IL 61801. E-mail: hgaskins@uiuc.edu; Telephone: 217-244-3165; FAX: 217-333-8804. Closing date: November 1, 1998.

NIH-funded POSTDOCTORAL POSITIONS immediately available at New York University Medical Center. Two positions are available to study epithelial cell biology, including (1) signal transduction and molecular regulation of proinflammatory cytokines or (2) gene therapy for lung cancer using viral vectors. Requirements: M.D. or Ph.D. Requires U.S. citizenship or permanent U.S. residency. Send e-mail curriculum vitae to: Joan Reibman, M.D., e-mail: reibmj01@gcsc.med.nyu.edu for signal transduction or John Hay, M.D., e-mail: hayj01@mcrc6.med.nyu.edu for gene therapy position. Alternatively FAX to: Division of Pulmonary and Critical Care Medicine, New York University Medical Center, 550 1st Avenue, Room NB7N24, New York, NY 10016. FAX: 212-263-8442.

POSTDOCTORAL POSITION available immediately to study cell and molecular biology of cardiac valve and blood vessel endothelial and interstitial cells. The project involves collaborations with a multidisciplinary team of Investigators focused on the long-term goal of developing tissue-engineered cardiac valves and blood vessels for use in patients with cardiovascular disease. Applicants must have a Ph.D. or M.D. degree with experience in vascular biology and/or molecular biology. Send curriculum vitae and names of three references to either: Dr. Joyce Bischoff, Department of Surgery, or Dr. Stephen Roth, Department of Cardiology, Children's Hospital and Harvard Medical School, 300 Longwood Avenue, Boston, MA 02115.

## POSITIONS OPEN

POSTDOCTORAL TRAINEESHIPS in toxicology. Biochemical and molecular toxicology, neurotoxicology, immunotoxicology, inhalation toxicology, and reproductive toxicology.

The EPA funding sources limit awards to U.S. citizens or permanent residents. All positions require a doctoral degree (usually Ph.D. degree) in the appropriate biomedical science.

Preliminary applications (curriculum vitae, names and addresses of three references) for all positions should be sent to: David J. Holbrook, Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC 27599-7270. Telephone: 919-966-4685; FAX: 919-966-6357; e-mail: david\_holbrook@unc.edu. For specific information on the research training, a candidate should contact the Research Advisor for each position.

Project 1: Research on the interactions of cholinesterase inhibitors pesticides (organophosphates and carbamates) in young and adult rats. Pharmacokinetic, biochemical, and neurophysiological endpoints will be used to determine the nature of interactive effects. Development of physiologically based pharmacokinetic models will allow scaling of effects to different exposure scenarios and species. This will help determine differences in age-related changes in susceptibility to cholinesterase-inhibiting pesticides. Advisor: Dr. David Herr, Neurotoxicology Division (MD-74-B), Research Triangle Park, NC 27711. Telephone: 919-541-0380; FAX: 919-541-4849; e-mail: herr.david@epamail.epa.gov.

Project 2: This project concerns the evaluation of immune function development in rats exposed perinatally to the organochlorine heptachlor and the determination of the persistence of altered immune function following such early life exposure. Alterations in innate, cell-mediated, and humoral immunity will be evaluated. This will include assessment of macrophage and Natural Killer cell activity, T cell-mediated function, and B cell function. Since it has been demonstrated that perinatal exposure to the organochlorine pesticide chlordane results in depression of certain T cell, macrophage, and stem cell functions (i.e., delayed hypersensitivity, tumoricidal activity, and production of reactive oxygen intermediates, and defects in responsiveness to growth factors, respectively), these endpoints will be included in the evaluation of immune function following perinatal heptachlor exposure. Upon identification of heptachlor-induced immune alterations, attempts will be made to determine the cellular/subcellular target(s) by flow-cytometry subset analysis and cytokine profiles (i.e., RT-PCR and ELISA techniques) aimed at characterizing the changes. The candidate should have experience in flow cytometry and molecular biology. Advisor: Dr. Ralph J. Smialowicz, Immunotoxicology Branch, Experimental Toxicology Division (MD-92), Research Triangle Park, NC 27711. Telephone: 919-541-5776; FAX: 919-541-5394; e-mail: smialowicz.ralph@epamail.epa.gov.

Two POSTDOCTORAL POSITIONS are available immediately to study the molecular and cellular basis of African trypanosome transmission in tsetse. Applicants with a Ph.D. and expertise in molecular biology, microbiology, molecular entomology, cell biology, or immunocytochemistry are preferred. Please send curriculum vitae, statement of interest, and addresses of three references to: Dr. Serap Aksoy, Department of Epidemiology, Yale University, 60 College Street, P.O. Box 208034, New Haven, CT 06520-8034. E-mail: serap.aksoy@yale.edu. Yale is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE position available in an active research program focused on macrophage biology related to atherosclerosis and vessel wall disease. Training/experience in cell/molecular biology and a background in atherosclerosis-related research preferred. Stable funding and competitive compensation offered. Reply with curriculum vitae, a cover letter, and three references to: Dr. Theodore Mazzone, Director, Endocrinology and Metabolism, Rush Medical Center, 1653 West Congress Parkway, Chicago, IL 60612.

POSTDOCTORAL POSITIONS. Protein crystallography. To study macromolecular complexes and the role of protein-protein interactions in apoptosis, integrin signal transduction, and cancer. Protein Crystallographers who are highly motivated with a strong background in protein characterization and/or molecular biology are preferred. Send curriculum vitae and names of three references to: Dr. Kathryn Ely, Director, Molecular Anatomy of the Cell Program, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037.

## POSITIONS OPEN

### RESEARCH OPPORTUNITIES IN CELLULAR AND MOLECULAR IMMUNOLOGY AND PROTEIN CHEMISTRY At National Cancer Institute

Immediate openings exist for full-time POSTDOCTORAL FELLOWSHIPS in the Tumor Immunology Section, Surgery Branch, National Cancer Institute, National Institutes of Health, Bethesda, Maryland to study the immune response to tumors in humans and in mice.

One project aims to study tumor proteins recognized by immune cells, and requires a strong background in protein purification and molecular biology. For additional positions, we seek candidates with experience in cellular immunology as well as molecular biology. Ongoing projects include the identification of new tumor-associated antigens, the study of immune tolerance to tumor-associated differentiation antigens, and the development of synthetic and recombinant anti-cancer vaccines.

Applications must be postmarked by October 9, 1998.

Send cover letter, curriculum vitae, and statement of research interests to:

Steven A. Rosenberg, M.D., Ph.D.  
Chief of Surgery  
National Cancer Institute  
Building 10, Room 2B42  
Bethesda, MD 20891-1502  
Telephone: 301-496-4164

Selections for these positions will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, gender, national origin, politics, marital status, physical or mental disability, age, sexual orientation, or membership or nonmembership in an employee organization. The NIH is an Equal Opportunity/Affirmative Action Employer.

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POSTDOCTORAL POSITIONS at the National Cancer Institute (NCI) in developmental signal transduction under the direction of Ira O. Daar, Ph.D. Our studies in *Xenopus laevis* are aimed at understanding the signal transduction events elicited by a member of the Eph family of receptor tyrosine kinases and its ligand. Another project examines the regulation and function of Xmeis, a novel family of *Xenopus* homeodomain proteins whose murine homologues are involved in myeloid leukemogenesis. Applicants should have a strong background in molecular, cellular, or developmental biology. Candidates must be U.S. citizens or permanent residents and have less than five years of postdoctoral experience. Send curriculum vitae and correspondence to: Ira Daar, Ph.D., Laboratory of Leukocyte Biology, Building 567, Room 228, NCI-Frederick Cancer Research and Development Center, Frederick, MD 21702. E-mail: daar@ncifcrf.gov; FAX: 301-846-7034.

### POSTDOCTORAL FELLOW

Position available at Lawrence Berkeley National Laboratory, Berkeley, California. Participate in a program on senescence and immortalization in cultured human mammary epithelial cells involving regulation of telomerase activity; identification and isolation of differentially expressed genes; cell cycle controls; telomere and chromatin structure. See: *Mol. Biol. Cell* 8:2391-2405, 1997. Requires experience in molecular biology and biochemistry. Résumé and names of three references to: Dr. Martha Stamfer, Lawrence Berkeley Laboratory, Building 934, Berkeley, CA 94720. E-mail: mrgs@mhl.lbl.gov. (Job# LSD10037/JSC1) View full job description and further information at our website: <http://www.lbl.gov/lbl.html>. Equal Opportunity Employer.



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Position to study interactions of biologically active peptides with bacterial ribosomes and RNA. Ph.D. in biology, molecular biology, chemistry, biochemistry, or a related discipline is required. Experience working with RNA, ribosomes, and/or molecular genetics in bacteria preferred. Competitive salary commensurate with experience. Send curriculum vitae, three letters of recommendation, and a brief statement of research interests to: **Paul Lovett, Ph.D., Department of Biological Sciences, University of Maryland, Baltimore County, 1000 Hilltop Circle, Baltimore, MD 21250. UMBC is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL POSITIONS

Postdoctoral positions available at the University of Pennsylvania School of Medicine to study insulin signaling. Applicants should have Ph.D. or M.D. and a strong background in cell and/or molecular biology, biochemistry, and signal transduction. Send a curriculum vitae and names of three references to: **Dr. Leonard Jarett or Dr. Shuko Harada, Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, D100 Richards Building, 37th and Hamilton Walk, Philadelphia, PA 19104. FAX: 215-573-2250; e-mail: jarett@mail.med.upenn.edu or haradas@mail.med.upenn.edu. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately to use modeling and/or statistical approaches to examine how ecological complexity affects the response of coastal aquatic systems to multiple stressors. Successful candidate will collaborate with a large interdisciplinary team ranging from Ecologists to Economists on a study of the Patuxent River, a tributary of the Chesapeake Bay. Send curriculum vitae, statement of experience and interests, and names of three references by November 10, 1998, to: **Denise Breitburg, The Academy of Natural Sciences, Estuarine Research Center, 10545 Mackall Road, St. Leonard, MD 20685. E-mail: breit@acnatsci.org. The Academy of Natural Sciences is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITIONS** are available to study apoptosis. Current research topics include regulation of pro-caspase activation and signaling pathways of the death receptor FAS and TNFR1 (see: **Yang et al., Cell 89:1067; Molecular Cell 1:319; Science 281:1355**). Strong experience in molecular biology, biochemistry, immunology, or mouse genetics is preferred. If interested, please send curriculum vitae, a brief description of research experience, and contact information for three references to: **Xiaolu Yang, Ph.D., Institute for Human Gene Therapy, University of Pennsylvania, 413A SCL, 422 Currie Boulevard, Philadelphia, PA 19104-6100. FAX: 215-573-8606; e-mail: xyang@mail.med.upenn.edu.**

**POSTDOCTORAL POSITION** is available to study structure/function of human factor VIII (anti-hemophilic factor) and its interactions with other blood-clotting proteins. Candidates should have a strong background in protein biochemistry and enzymology with some experience in molecular biology. Send curriculum vitae and contact information for three references to: **Dr. Philip J. Fay, Vascular Medicine Unit, P.O. Box 610, University of Rochester School of Medicine, Rochester, NY 14642. An Equal Opportunity/Affirmative Action Employer.**

## EUROPEAN OPPORTUNITY

### UNIVERSITY COLLEGE LONDON INSTITUTE OF NEUROLOGY

**RESEARCH ASSISTANT** required for a project involving PET, event-related potentials, and magnetic stimulation to investigate time perception and timing in motor control in normal subjects and patients with Parkinson's or cerebellar disease. Applicants should have a background in psychology, physiology, or a related discipline; research experience and expertise in programming desirable. Post available from December 1998 for two years. Salary on the RA 1A/1B scale up to £20,409 per annum inclusive. Applications (curriculum vitae and names of two referees) by 25 October 1998 to: **Dr. M. Jahanshahi, Institute of Neurology, Queen Square, London WC1N 3BG UK** from whom further details are available. Telephone: 0171-829-8759; FAX: 0171-278-9836; e-mail: m.jahanshahi@ion.ucl.ac.uk. Working toward Equal Opportunity.

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**POSTDOCTORAL and RESEARCH ASSOCIATE** positions available to conduct research on the role of sphingolipids as signal transducers during stress responses in *Saccharomyces cerevisiae* (*J. Biol. Chem.* 272:30196, 273:19437; *Ann. Rev. Biochem.* 67:27). Experience with yeasts, lipids, enzymology, or signal transduction is required. Send résumé with names of three references to: **Robert Dickson, Department of Biochemistry, University of Kentucky, Lexington, KY 40536-0298.**

## COURSES & TRAINING

**SHORT COURSE ON TIME-RESOLVED FLUORESCENCE SPECTROSCOPY.** The Center for Fluorescence Spectroscopy, at the University of Maryland School of Medicine, is offering a Short Course on "Principles and Applications of Time-Resolved Fluorescence Spectroscopy" in Baltimore, March 22-26, 1999. The course will cover basic and advanced topics in fluorometry, including time- and frequency-domain measurements, and Forster energy transfer. Advanced topics include chemical sensing, imaging, fiber optics, infrared fluorometry, two-photon excitation, instrumentation, and fluorescence microscopy, protein fluorescence, DNA technology, and immunoassays. Textbook, course materials, lunches, and refreshments will be provided. The Instructors include **Dr. J. R. Lakowicz, Dr. I. Gryczynski, and Dr. R. B. Thompson.** For further information, a schedule, and fees, please contact: **Ms. Mary Rosenfeld or Prof. J. R. Lakowicz, Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, 725 West Lombard Street, Baltimore, MD 21201. Telephone: 410-706-8409; FAX: 410-706-8408; e-mail: cfs@cfsc.umbi.umd.edu; website: http://cfs@cfsc.umbi.umd.edu. Deadline for enrollment is February 14, 1999, with later enrollment if space permits.**

## AWARD

### THE ROYAL SOCIETY OF CHEMISTRY CANCER THERAPY AWARD

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Nominations for the first award must be accompanied by a brief supporting statement and should be sent to: **Stanley Langer, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN UK. E-mail: langer@rsc.org by 31 October 1998.**

## EUROPEAN OPPORTUNITIES

### POSTDOCTORAL POSITION IN CELLULAR BIOLOGY

Physiology Unit, Centre National de la Recherche Scientifique-University Toulouse, France. The project investigating microenvironments of hematopoietic and immunocompetent cells is at the frontier between immunity, development, and energy metabolism. An experience in flow cytometry analysis, cellular interactions, and a good knowledge in the processes of cell differentiation would be appreciated. The position is funded for one year beginning December 1998. Contact: **L. Pénicaud, FAX: 33-5-62-17-09-05; e-mail: penicaud@rangueil.inserm.fr.**

### POSTDOCTORAL POSITIONS REGULATION OF ANGIOGENESIS AND LYMPHANGIOGENESIS

The group has a multinational composition and belongs to the Haartman Institute ([website: http://www.haartman.helsinki.fi/hi/res/alitalo/alitalo.html](http://www.haartman.helsinki.fi/hi/res/alitalo/alitalo.html)) and Biocentrum Helsinki Center of Excellence ([website: http://www.helsinki.fi/biocentrum/](http://www.helsinki.fi/biocentrum/)). Applications should include curriculum vitae and list of publications plus two letters of reference:

**Kari Alitalo, M.D., Ph.D.**  
Research Professor of  
the Finnish Academy of Sciences  
Molecular/Cancer Biology Laboratory  
Haartman Institute, University of Helsinki  
P.O. Box 21 (Haartmaninkatu 3)  
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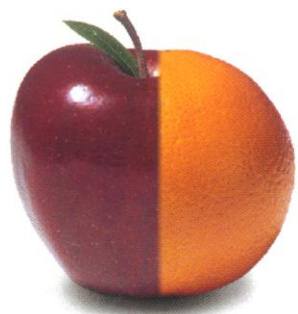
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