GORDON RESEARCH CONFERENCES

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

Summer 1996

The 1996 Summer Gordon Research Conferences will be held in New Hampshire and Rhode Island. Fall Conferences will be held at Queen's College, Oxford, England; Pruhonice, Czech Republic; Fukuoka, and Gifu, Japan.

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

NOTE: The first session for all Summer Conferences (U.S.) will begin on Sunday evening and the last session will end on Thursday evening.

Feel free to copy the blank application form or request more forms or additional information from the:

GORDON RESEARCH CONFERENCES
UNIVERSITY OF RHODE ISLAND
P.O. BOX 984
WEST KINGSTON, RI 02892-0984 USA

E-MAIL: GRC@GRCMAIL.GRC.URI.EDU
FAX: (401) 783-7644
PHONE: (401) 783-4011

More detailed information for these Conferences can be obtained on the Internet.

VIA GOPHER:	HACKBERRY.CHEM.NIU.EDU PORT 70
VIA WORLD WIDE WEB:	HTTP://HACKBERRY.CHEM.NIU.EDU:70/0/WEBPAGE.HTML
	HTTP://WWW.GRC.URI.EDU (NEW SITE SCHEDULED TO OPEN BY APRIL, 1996)
VIA ANONYMOUS FTP:	HACKBERRY.CHEM.NIU.EDU (IN THE PUB/CONFERENCES/GORDONCONFERENCES DIRECTORY)

Poster sessions are a regular part of most Conferences. Contact the Chair of the Conference if you wish to present a poster.

NOTE: Correlated Electron Systems is now July 21 - 26 at Plymouth State and Point and Line Defects is now August 18 - 23 at Proctor Academy. They have switched due to a major conflict for P&LD.

ADHESION
TILTON SCHOOL
AUGUST 4 - 9, 1996

Van P. Thompson, *Chair*
Alphonsus Pocius, *Vice Chair*

TAILORED SURFACES
R. P. Wool
L. Penn / S. Milner / A. Balazs

TAILORED INTERPHASES AND POLYMER ADVANCES
J. Antonucci
E. J. Kramer / J. Stansbury / D. Porter

ADHESION AND SELF-ASSEMBLED MONOLAYERS
J. Gardella
A. Czanderna / R. Opila / D. Allara

POLYMER -POLYMER INTERACTIONS AND CONTACT ADHESION
A. Ghent
A. Roberts / A. Jackson

BIOADHESION AND INTERPHASES
J. Gwinnet
J. D. Eick / D. Pashley / M. Tirrell

COMPOSITE INTERPHASES IN CHOPPED FIBER AND PARTICULATE FILLERS
L. Drzal
J. L. Thomason / J. Marcinko

DRAMATIZING ADHESION
A. Pocius
G. Korba

PLASMA MODIFIED SURFACES AND CHARACTERIZATION
J. Wightman
J. Boerio / G. Davis / Koenig

FRACTURE MECHANICS, WORK OF ADHESION AND DURABILITY COMPUTER MODELING

ARCHAEA: ECOLOGY, METABOLISM, AND MOLECULAR BIOLOGY
PLYMOUTH STATE COLLEGE
JULY 14 - 19, 1996

William Whitman, *Chair*
Albrecht Klein, Vice *Chair*

GENOME SEQUENCING PROJECTS
G. Olsen / J. Nolling / J. Reeve

ENZYMES AND METABOLISM 1
H. Konig / Y. Koga / R. Thauer / P. Schonheit / J. Ferry

ENZYMES AND METABOLISM 2
W. de Vos / M. Adams

GENE EXPRESSION
M. Thomm / C. Daniels / S. DasSarma / J. Leigh / D. Tumbula / W. Whitman

GENE REGULATION
I. Sniezko / A. Klein / M. Betlach

CELL STRUCTURE
F. Pfeifer / K. Jarrell / W. Baumeister / T. Beveridge

ENERGY METABOLISM
D. Oesterhelt / G. Gottschalk / G. Schaefer

ECOLOGY OF ARCHAEA
R. Huber / J. Hackstein

GENETIC ELEMENTS OF SULFOLOBALES
W. Zillig

ATOMIC AND MOLECULAR INTERACTIONS
COLBY-SAWYER COLLEGE
JUNE 30 - JULY 5, 1996

David Nesbitt, *Chair*
Robert Wyatt, *Vice Chair*

HIGHLY QUANTUM SYSTEMS
R. Miller
T. Oka / B. Whaley / P. Toennies

NEW PHYSICS WITH LASER COOLED ATOMS
J. Weiner
C. Wieman / D. Pritchard

REACTIONS IN CLUSTERS
D. Clary
M. Lester / Z. Bacic / J. P. Visticot

FIXED CONFERENCE FEES -1996

	NH	*RI*	*UK*	*Japan*	*Czeh Rep.*
Conferee - Double Occupancy	$ 515	$ 540	NA	$ 790	$ 520
Conferee - Single Occupancy	$ 565	$ 590	$ 675	NA	$ 545
Conferee - Non Resident	$ 435	$ 450	$ 640	$ 565	NA
Guest - Double Resident	$ 365	$ 390	$ 525	$ 640	$ 370
Guest - Single Resident	$ 415	$ 440	$ 525	NA	$ 395
Guest - Non Resident	$ 285	$ 300	$ 490	$ 415	NA

If the final pre-paid registration is postmarked at least three weeks prior to the meeting, a $50 discount may be taken on the Fixed Fee.

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

MOLECULAR ION CLUSTERS
T. Zwier
E. Bieske / D. Neumark

ATOMIC AND MOLECULAR SCALE IMAGING
P. Weiss
C. Lieber / J. Trautman / W. E. Moerner

MOLECULE-SURFACE INTERACTIONS
B. Kay
S. Ceyer / A. Kummel

PHOTOMOLECULAR INTERACTIONS
L. Butler
A. Wotdke / P. Vacarro / D. Chandler

INTERATOMIC FORCES IN IONS
J. Hutson
A. Carrington

STATE-TO-STATE DYNAMICS
J. Zhang
H. Meyer / J. Bowman / F. Crim

BACTERIAL CELL SURFACES

NEW ENGLAND COLLEGE
JUNE 30 - JULY 5, 1996

Thomas J. Silhavy / Cécile Wandersman, *Co-Chairs*

TRANSPORT
W. Boos
H. Shuman / H. Nikaido / P. Maloney

PROTEIN TRANSLOCATION
J. Beckwith
A. Johnson / B. de Kruijff / W. Wickner / H. Tokuda

PROTEIN STRUCTURE
H. Nikaido
A. Engel / T. Schirmer

PROTEIN FOLDING
L. Randall
S. Hultgren / D. Agard / J. Beckwith / C. Georgopoulos

VIRULENCE
A. Ullmann
T. Meyer / P. Sansonetti / E. Groisman

ASSEMBLY AND SECRETION
A. Pugsley
J. Galan / R. Macnab / M. Russel / S. Lory

SIGNAL TRANSDUCTION AND GENE REGULATION
R. Kadner
V. Braun / J. Hoch / C. Chang / R. Hengge-Aronis

CELL DIVISION
D. D'Ari
J.-V. Holtje / L. Rothfield / J. Lutkenhaus / A. Newton

CELLULAR COMMUNICATION AND DEVELOPMENT
J. Hoch
D. Kaiser / R. Losick / Bonnie Bassler

BASEMENT MEMBRANES

NEW ENGLAND COLLEGE
JUNE 9 - 14, 1996

Brigid L. M. Hogan / Peter D. Yurchenco, *Co-Chairs*

STRUCTURE AND FUNCTION OF BASEMENT MEMBRANE MOLECULES AND THEIR SUPRAMOLECULAR ASSEMBLY
P. Yurchenco
J. Engel / L. Sakai / M. Ruegg

CELLULAR RECEPTORS FOR BASEMENT MEMBRANES
C. Damsky
A. Sonnenberg / R. Fassler

BASEMENT MEMBRANE AND EXTRACELLULAR MATRIX IN NEURONAL DEVELOPMENT
L. Reichardt
A. Lander / M. Tessier-Lavigne

BASEMENT MEMBRANE AND EXTRACELLULAR MATRIX IN NEUROMUSCULAR DEVELOPMENT
E. Engvall
J. Sanes / K. Campbell

GENETIC AND OTHER HUMAN DISORDERS OF BASEMENT MEMBRANES
K. Tryggvason
R. Burgeson / A. Christiano / H. Blau

GENETIC ANALYSIS OF BASEMENT FUNCTION - I
A. Chung
U. Mayer / J. Kramer

GENETIC ANALYSIS OF BASEMENT FUNCTION - II
L. Fessler
B. Wadsworth / D. Fambrough

KEYNOTE SPEAKER: GENETIC ANALYSIS OF ADHESION
R. Hynes

BASEMENT MEMBRANE AND EXTRACELLULAR MATRIX IN EMBRYONIC DEVELOPMENT
B. Hogan
S. Vainio / E. Almedia

BIOCATALYSIS

KIMBALL UNION ACADEMY
JULY 7 - 12, 1996

Paul van Eikeren / Romas Kazlauskas, *Co-Chairs*
Tomas Hudlicky / David Dodds, *Co-Vice Chairs*

The conference will focus on three themes:

1. **NOVEL APPLICATIONS OF ENZYMES**
2. **REDESIGN OF ENZYME PROPERTIES AND FUNCTION**
3. **DISCOVERY AND APPLICATION OF NEW ENZYMES**

Further information may be obtained from:

Paul van Eikeren
Argonaut Technologies, Inc.
887 Industrial Road, Suite G
San Carlos, CA 94070

Fax:
415-598-1359

e-mail:
pvaneikeren@argotech.com

or

http://www.argotech.com/biocatalysis

BIOELECTRO-CHEMISTRY

SALVE REGINA UNIVERSITY
JULY 21 - 26, 1996

James C. Weaver, *Chair*
Paul Gailey, *Vice Chair*

BIOPHYSICAL MECHANISMS OF MAGNETIC FIELD RECEPTION I
I. Gyuk
P. Valberg / A. Kobayashi / J. Kirschvink / K. Schulten

BIOPHYSICAL MECHANISMS OF MAGNETIC FIELD RECEPTION II
M. Marron
C. Grissom / R. Adair / T. Vaughan

BIOPHYSICAL MECHANISMS OF MAGNETIC FIELD RECEPTION III
C. Rafferty
J. Walleczek

BIOPHYSICAL MECHANISMS OF ELECTRIC FIELD RECEPTION I
A. Kalmijin / K. McLeod

MOLECULAR AND BIOPHYSICAL EVENTS IN MEMBRANE PROTEINS I
C. Bean
F. Jaramillo / D. Astumian

MOLECULAR AND BIOPHYSICAL EVENTS IN MEMBRANE PROTEINS II
F. Hong
R. Aldrich / L. De Felice / G. Yellen

ELECTRICALLY DRIVEN TRANSPORT ACROSS BIOLOGICAL BARRIERS I
K. Kinosita
P. Green / J. Tamada

ELECTRICALLY DRIVEN TRANSPORT ACROSS BIOLOGICAL BARRIERS II
H. Bodde
E. Neumann / L. Tung / U. Pliquett

ELECTRICALLY DRIVEN TRANSPORT ACROSS BIOLOGICAL BARRIERS III
V. Preat
Y. Chizmadzhev

ELECTRICALLY DRIVEN TRANSPORT ACROSS BIOLOGICAL BARRIERS IV
B. Sisken
L. M. Muir / C. Nicolau / R. Lee

BIOENGINEERING & ORTHOPAEDIC SCIENCE

PROCTOR ACADEMY
JULY 28 - AUGUST 2, 1996

Steven A. Goldstein, *Chair*
Linda Sandell, *Vice Chair*

1. **THE INFLUENCE OF PHYSICAL FORCES ON GROWTH AND DEVELOPMENT (MECHANICAL EFFECTS ON PATTERNING)**
2. **MECHANICAL EFFECTS ON TISSUE REPAIR**
3. **CELL AND MOLECULAR MECHANISMS ASSOCIATED WITH MECHANO TRANSDUCTION**
4. **AGING EFFECTS ON MECHANO TRANSDUCTION MECHANISMS**
5. **COMPUTATIONAL MODELS OF CELLULAR EVENTS**

Speakers:
C. Archer / S. Arnoczky / A. Banes / T. Brown / J. Buckwalter / D. Burr / R. Coutts / R. Duncan / T. Einhorn / J. Folkman / C. Frank / D. Fyhrie / F. Guilak / R. Heinegard / E. Hunziker / R. Keller / D. Kingsley / D. Mann / K. McLeod / L. Miller / A. Radcliff / L. Sandell / B. Sumpio / S. Weinbaum

BIOLOGICAL REGULATORY MECHANISMS

COLBY-SAWYER COLLEGE
JUNE 23 - 28, 1996

Ralph R. Isberg / Susan Lindquist, *Co-Chairs*
Jeff Roberts, *Vice Chair*

CHROMOSOMAL SEGREGATION
A. Murray
K. L. Gould / T. Orr-Weaver / A. Wright

MACROMOLECULAR ASSEMBLY
J. Steitz
S. Hultgren / C. Peterson / D. F. Smith

PATHOGENESIS
D. Portnoy
C. Manoil / J. F. Miller / H. Shuman

POST-TRANSCRIPTIONAL REGULATION
R. Lehmann
M. Belfort / R. Gesteland / F. Perler / G. Ruvkun

PRION PROTEINS
R. Wickner
B. Caughey / Y. Chernoff / S. Prusiner

PROTEIN LOCALIZATION
W. Wickner
J. Brodsky / S. Ferro-Novick / P. Silver

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

PROTEOLYSIS
S. Gottesman
P. Howley / E. Jones / M. W. Kirschner / R. T. Sauer

SIGNAL TRANSDUCTION
J. Chory
E. Elion / M. Simon / P. Sternberg

TRANSCRIPTION
J. Liss
R. Landick / L. Rothman / R. Young

BIOMINERALIZATION
(formerly Calcium Phosphates)
PLYMOUTH STATE COLLEGE
AUGUST 4 - 9, 1996

Henry C. Margolis, *Chair*
Irving M. Shapiro, *Vice Chair*

BIOMIMETIC MATERIALS SYNTHESIS
G. D. Stucky
S. Mann

BIOMINERALS AND PROTEIN INTERACTIONS
J. C. Elliott
L. Addadi / J. S. Evans / M. G. Taylor

MECHANISMS OF CRYSTAL GROWTH (DISSOLUTION) IN VITRO AND IN MINERALIZED TISSUES
D. G. A. Nelson
J. Christoffersen / F. J. G. Cuisinier

REGULATION OF BIOMINERALIZATION
A. Boskey
C. Brownlee / P. T. Guidon / E. O. Paschalis

CELLULAR CONTROL OF BIOMINERALIZATION
H. C. Anderson
I. M. Shapiro / R. E. Wuthier

MINERALIZATION MECHANISMS OF TEETH AND BONES
W. Butler
A. G. Fincham / A. Veis / H. A. Goldberg

ABNORMAL CALCIFICATION
D. A. Bushinsky
F. G. Toback

BIOMINERALS AND SYNTHETIC ANALOGS
M. D. Grynpas
C. Rey / B. Constantz / G. A. Ozin

MOLECULAR MECHANISMS CONTROLLING ABALONE SHELL FORMATION
W. Landis
D. E. Morse

BIOMOLECULAR RECOGNITION
COLBY-SAWYER COLLEGE
AUGUST 4 - 9, 1996

Jannette Carey, *Chair*
David Grainger, *Vice Chair*

Program information for this conference is not available at this time. For further information contact the chair of the conference at:

Jannette Carey
Princeton University
Chemistry Dept.
Princeton, NJ 08544

Fax:
609-258-6746

e-mail:
carey@chemvax.princeton.edu

BIOORGANIC CHEMISTRY
PLYMOUTH STATE COLLEGE
JUNE 23 - 28, 1996

Diane Trainor / Craig Wilcox, *Co-Chairs*
Anthony Czarnik, *Vice Chair*

THEORY AND PREDICTION
D. Beveridge / M. Gilson / P. Kollman

DNA MODIFICATION
P. Hopkins / M. Tomasz / T. Widlanski

BIOCHEMICAL SIGNALS
S. Schreiber / M. Klimas / D. Dougherty

MECHANISM I
N. Sampson / N. Thornberry / G. Verdine

MECHANISM II
M. Distefano / D. Hilvert / N. Usman

PHOSPHORYL TRANSFER
M. Cobb / K. Chenault

BIOPOLYMERS
SALVE REGINA UNIVERSITY
JUNE 16 - 21, 1996

Ken Johnson / Carlos Bustamante, *Co-Chairs*

RNA STRUCTURE AND FUNCTION
Nacho Tinoco
J. Puglisi / P. Moore / O. Uhlembeck / D. Turner

DNA STRUCTURE AND FUNCTION
R. Dickerson
J. Feigon / D. Chrothers

NUCLEIC ACID ENERGETICS
W. Olson
A. Stasiak / S. Harvey / E. Kool

PROTEIN-NUCLEIC ACID INTERACTIONS
P. von Hippel
T. Lohman / S. Kustu / D. Hawley / K. Anderson

PROTEIN-NUCLEIC ACID STRUCTURE
J. Wang
R. Ebright / J. Wang / E. Arnold

PROTEIN STRUCTURE
P. Sigler
J. Walker

PROTEIN FOLDING
B. Mathews
H. Sun Chan / R. Wolfenden

3-D STRUCTURAL COMPUTATIONS
G. Rose
B. Roux / M. Levitt

CANCER
SALVE REGINA UNIVERSITY
AUGUST 4 - 9, 1996

Frank J. Rauscher III, *Chair*
Terry Van Dyke, *Vice Chair*

KEYNOTE ADDRESS CANCER: THE BIG PICTURE
P. Vogt
TBA

SIGNALLING: MEMBRANE TO NUCLEUS
J. Ihle
F. McCormick / J. Blenis / N. Tonks / TBA

CELL CYCLE REGULATION
T. Hunter
D. Beach / S. Reed / TBA

ONCOGENESIS AND DNA REARRANGEMENTS
M. Cleary
N. Speck / G. Gilliland / R. Dalla Favera / D. Ron

CELL DEATH/DEFAULT PATHWAYS
G. Prendergast
E. White / G. Evan / TBA

ANIMAL MODELS
T. VanDyke
T. Curran / TBA

DEVELOPMENT AND DIFFERENTIATION
C. Abate
L. Chodosh / K. Georgopoulos / TBA

TRANSCRIPTIONAL REGULATION OF CELL GROWTH
F. Rauscher
M. Lazar / M. Parker / W. Kaelin / TBA

STRUCTURAL ASPECTS OF ONCOGENIC MOLECULES
A. Gronenborn
T. Halazonetis / P. Freemont

CARDIAC REGULATORY MECHANISMS
COLBY-SAWYER COLLEGE
JULY 7 - 12, 1996

Marlene Hosey, *Chair*
Eduardo Marban, *Vice Chair*

SIGNAL TRANSDUCTION - I
E. Lakatta
M. Caron / J. Scott / F. Hofmann

MOLECULAR BASIS OF EXCITABILITY
H. Fozzard
E. Marban / C. Nichols / Y. Kurachi / W. Stühmer

SIGNAL TRANSDUCTION - II
J. Heller Brown
N. Nathanson / E. Peralta

CA SIGNALLING - I
L. Jones
M. Hosey / J. Lederer / G. Wier / K. Philipson

CA SIGNALLING - II
M. Tada
E. Kranias / G. Meissner

LATE-BREAKING SCIENCE
M. Morad

CONTRACTILE PROTEINS AND DISEASE
M. Endoh
R. Moss / J. Solaro / J. Leiden / C. Seidman

PRECONDITIONING & HYPERTROPHY
S. Houser
D. Escande / S. Izumo / K. Schwartz

PLENARY SESSION: GENETIC DISEASES OF MEMBRANE PROTEINS
M. Hosey
L. Ptacek / K. Campbell

CATALYSIS
COLBY-SAWYER COLLEGE
JUNE 23 - 28, 1996

Rostam J. Madon, *Chair*
Vincent A. Durante, *Vice Chair*

THEME: ASSISTED DESIGN OF CATALYSTS REACTION KINETICS
M. Boudart / J. A. Dumesic / J. T. Gleaves / J. G. Goodwin / E. Iglesia

SPECTROSCOPY / SURFACE SCIENCE
D. N. Belton / J. G. Chen / B. Clausen / G. W. Coulston / J. J. Fripiat

IN-SITU MICROSCOPY
R. T. K. Baker / P. L. Gai

COMPUTER MODELING & STRUCTURE CALCULATIONS
A. Chakraborty / J. Newsam / J. Sauer

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

CELL BIOLOGY OF THE NEURON

PLYMOUTH STATE COLLEGE
JUNE 16 - 21, 1996

Thomas C. Südhof / Richard H. Scheller, *Co-Chairs*
Reinhard Jahn / Susan Amara, *Co-Vice Chairs*

CELLULAR BIOGENESIS AND SYNAPTOGENESIS
G. Fischbach / W. Huttner / R. Kelly / L. Role

NEURONAL CYTOSKELETON, MOTORS, AND NEURODEGENERATION
D. Cleveland / P. Greengard / T. Martin

LIGAND GATED CHANNELS
Z. Hall / S. Heinemann / S. Nakanishi / P. Seeburg / N. Unwin

ION CHANNELS AND TRANSPORTERS
S. Amara / W. Catterall / L. Jan

NEUROTRANSMITTER RELEASE I
W. Almers / K. Dunlap / E. Neher / T. Südhof

IN VITRO SYSTEMS
P. DeCamilli / J. Rothman / R. Scheller

SENSORY SYSTEMS
R. Axel / C. Bargmann / J. Hudspeth / C. Zuker

NEUROTRANSMITTER RELEASE II
H. Bellen / R. Jahn / T. Schwartz

SYNAPTIC PLASTICITY
E. Kandel / C. Stevens / S. Tonegawa / R. Tsien

CELLULAR & MOLECULAR MYCOLOGY

HOLDERNESS SCHOOL
JUNE 16 - 21, 1996

Paul Magee / Anne Desjardins, *Co-Chairs*
Jay Dunlap / Gillian Turgeon, *Co-Vice Chairs*

FUNGAL GENOMICS
S. Scherer
S. Scherer / M. Johnston / P. Sharp

FUNGAL GROWTH AND THE CELL CYCLE
J. Dunlap
S. Osmani / D. Bell-Pederson / D. Kellogg

GENE CLUSTERS AND REGULATION I
N. Keller
M. Penalva / T. Adams / F. Trail

GENE CLUSTERS AND REGULATION II
Y. Kerjan
C. Scazzachio / T. Hohn / M. Brandiss

FUNGAL EVOLUTION
J. Taylor
M. Gardes / A. Burt / P. DePriest

SEXUAL DEVELOPMENT
M. A. Preston
M. A. Nelson / M. Zolan / G. Turgeon

CELL MORPHOGENESIS
R. Howard
C. Bracker / H. Hoch / N. Read

ANIMAL PATHOGENESIS
B. DiDomenico
N. Gow / Y. Koltin / B. Keath

PLANT-FUNGAL INTERACTIONS
S. Briggs
R. Dean / B. Valent / M. Coleman

CEMENT-BASED MATERIALS, CHEMISTRY AND PHYSICS OF (NEW)

PLYMOUTH STATE COLLEGE
JULY 28 - AUGUST 2, 1996

J. Francis Young, *Chair*

PROCESSING SCIENCE
C. F. Zukowski
W. Russell / E. M. Gardner

STRUCTURE OF HYDRATION PRODUCTS
H. F. W. Taylor
I. G. Richardson

MICROSTRUCTURE CHARACTERIZATION
S. Diamond / J. Beaudoin
K. Scrivener / H. M. Jennings

SIMULATION OF HYDRATION AND MICROSTRUCTURE DEVELOPMENT
F. H. Wittman
F. Tzschicholz

NEW ANALYTICAL TECHNIQUES APPLIED TO CEMENTITIOUS MATERIALS
C. Hall / A. Livingston
R. J. Kirkpatrick / A. J. Allen

SCIENTIFIC BASIS OF DURABILITY
T. O. Mason / D. M. Roy
L. J. Schwartz / F. P. Glasser

CREATING NOVEL MATERIALS
J. F. Young
E. Ishida

CERAMICS, SOLID STATE STUDIES IN

KIMBALL UNION ACADEMY
AUGUST 4 - 9, 1996

David S. Wilkinson, *Chair*
Carol Handwerker / Roger French, *Co-Vice Chairs*

COMPLEX MICROSTRUCTURED CERAMICS - CHALLENGES AND OPPORTUNITIES
R. Cannon
D. Clarke / W. Pompe

HETEROGENEITY IN SINGLE PHASE MATERIALS
K. Bowman
G. Messing / B. Lawn

SILICON NITRIDE - A MODEL IN CONTROLLED COMPLEXITY
S. Wiederhorn
M. Hoffmann / W. Luecke

PROCESSING APPROACHES TO COMPLEX CERAMIC-METAL MICROSTRUCTURES
M. Harmer
N. Claussen / S. Sass

MODELLING ELASTIC BEHAVIOUR
C. Carter
L.-Q. Chen

LAYERED AND GRADED MICROSTRUCTURES
B. Derby
S. Suresh / TBA

COMPLEX INTERFACES
J. Halloran
D. Marshall / A. Argon

CONTROLLED COMPLEXITY AT THE NANOSCALE
M. Mcguire
F. Lange / I. Aksay

SPECIAL TOPIC
D. S. Wilkinson

CHEMICAL SENSES: TASTE AND SMELL

SALVE REGINA UNIVERSITY
AUGUST 18 - 23, 1996

Barry W. Ache, *Chair*
Alan B. Spector, *Vice Chair*

HOW SHALL WE MEASURE STIMULUS QUALITY IN THE CHEMICAL SENSES?
C. Derby
P. Breslin / W. Cain / A. Gilbert / J. Glendenning

GENOMIC ORGANIZATION AND RECEPTOR EXPRESSION IN CHEMORECEPTOR CELLS
R. Reed
C. Bargmann / N. Chaudhari / D. Lancet / F. Margolis

ROLE OF PERIPHERAL INTEGRATION IN CODING CHEMOSENSORY STIMULI
J. VanHouten
H. Breer / D. Kalinoski / B. Lindemann / S. Roper

OSCILLATORY POTENTIALS: THEIR ROLE IN ODOR QUALITY DISCRIMINATION
A. Gelperin
J. Caprio / K. Delaney / J. Kauer / G. Laurant

IMAGING AS A KEY TO UNDERSTANDING CORTICAL REPRESENTATION OF STIMULUS QUALITY
G. Kobal
R. Doty / J. Gore / J. Hirsch / B. Kettenman

NEURAL REPRESENTATION OF THE AFFECTIVE (HEDONIC) DIMENSION OF CHEMICAL STIMULI
B. Slotnick
I. Bernstein / R. Norgren / P. Shhizgal / T. Yamamoto

RELATING MOLECULAR, PHYSIOLOGICAL AND PSYCHOLOGICAL STUDIES TO QUALITY RECOGNITION IN OLFACTION
T. Getchell
L. Buck / D. Laing / K. Mori / M. Shipley

RELATING MOLECULAR, PHYSIOLOGICAL AND PSYCHOLOGICAL STUDIES TO QUALITY RECOGNITION IN TASTE
M. Frank
J. DeSimone / S. Kinnamon / R. Margolskee / D. Smith

UNDERSTANDING CODING OF ODORS AND TASTES THROUGH UNDERSTANDING DRUG RECEPTORS
G. Shepherd
K. Strader

CHEMICAL SENSORS AND INTERFACIAL DESIGN (NEW)

COLBY-SAWYER COLLEGE
JULY 28 - AUGUST 2, 1996

Richard M. Crooks, *Chair*
Antonio J. Ricco, *Vice Chair*

OPTICAL AND ACOUSTIC WAVE-BASED SENSORS
D. Walt
M. Arnold / E. T. Zellers / D. A. Buttry

CHEMFETS, ISFETS, AND GAS SENSORS
R. C. Hughes
A. Janata / I. Lundström / N. Yamazoe

SENSOR SYSTEMS & MATHEMATICAL METHODS
A. J. Ricco
N. de Rooij / D. J. Harrison / G. C. Osbourn

MONOLAYERS, MULTILAYERS, AND POLYMERS FOR SENSING APPLICATIONS
I. Rubinstein
D. Bergbreiter / M. Grunze / D. Charych

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

BIOSENSORS & ELECTROCHEMICAL SENSORS
C. R. Martin
W. R. Heineman / M. Aizawa / D. Zare

MOLECULAR RECOGNITION
W. Göpel
T. E. Mallouk / D. N. Reinhoudt / F. L. Dickert

30-MINUTE TALKS BY YOUNGER SCIENTISTS IN THE FIELD
J. R. Stetter
M. J. Natan / R. C. Thomas / K. Balkus / D. Smith

COMMERCIALLY RELEVANT SENSORS & APPLICATIONS
E. M. Logothetis
M. Madou / H. Wohltjen / L. Bousse

15-MINUTE TALKS ON ANY TOPIC TO BE ARRANGED AT THE MEETING
R. M. Crooks

CHEMISTRY AT INTERFACES

KIMBALL UNION ACADEMY
JULY 21 - 26, 1996

John Texter, *Chair*
Kyle Vanderlick, *Vice Chair*

FUNCTION BASED ON ORGANIZATION
A. Baszkin
H. Ringsdorf

MOLECULAR DYNAMICS OF OIL/WATER AND BILAYER/WATER INTERFACES
S. Karaborni / I. Benjamin / *R. Larson* / T. Stouch

WORKSHOP ON SIMULATION OF AMPHIPHILE AGGREGATES
I. Siepmann / A. Pohorille / S. Feller / C. Care / J. Shelley

STRUCTURE AND PROPERTIES OF INTERFACIAL LAYERS BY ELECTRON DIFFRACTION AND ELECTRON MICROSCOPY
R. Hill / D. Dorset / *I. Talmon* / R. Strey

POLYMERIZATION IN NANOSTRUCTURED MEDIA
S. Qutubuddin / F. Candau

CATALYSIS IN AND ION REACTIVITY ON SURFACTANT ASSEMBLIES
R. Seiders / J. Rusling / *N. Garti* / L. Romstead

SPECTROSCOPIC ANALYSIS OF AMPHIPHILE CONFORMATION AND ORIENTATION AT LIQUID/LIQUID INTERFACES
J. Rabolt / G. Richmond / *N. Levinger* / R. Corn

ORGANIZATION OF TETHERED POLYMERS
W. Mattice / T. Cosgrove / *P. Mcguiggan* / D. Grainger

MECHANICAL EFFECTS OF COPOLYMER MOLECULES AT HOMOPOLYMER INTERFACES
A. Balazs / H. Brown

AGGREGATION OF SURFACTANTS AT WATER/SOLID INTERFACES
P. Vanysek / J. Lipkowski / *J. Zasadzinski* / S. Manne / *S. Satija* / R. K. Thomas / *P. Somasundaran* / L. Koopal / *J. Pemberton* / E. Koglin

EFFECT OF ADDITIVES ON THE GROWTH AND STRUCTURAL PROPERTIES OF CRYSTALLINE THIN FILMS ON LIQUID SURFACES
R. Scaringe / L. Leiserowitz

SELF-ASSEMBLY, MOLECULAR RECOGNITION, DYNAMICS AND REACTION CATALYSIS AT THE AIR-WATER INTERFACE
T. Penner / H. Yu / *G. Savelli* / T. Kunitake

FRONTIERS OF INTERFACIAL STRUCTURE
L. Magid / L. Turkevich

CHEMOTACTIC CYTOKINES

HOLDERNESS SCHOOL
JUNE 23 - 28, 1996

Dan Witt, *Chair*
Thomas Schall, *Vice Chair*

CHEMOTAXIS ASSAYS AND IN VIVO CORRELATES
S. Zigmond

CHEMOKINES: STRUCTURE AND ACTIVITY
TBA

CHEMOKINE RECEPTORS: STRUCTURE AND ACTIVITY
D. Oprian

RECEPTOR ACTIVATION AND SIGNALLING
H. Bourne

MODULATION OF CHEMOKINE ACTION
E. Leonard

CHEMOKINE ACTION ON LEUKOCYTES
M. Baggiolini

CHEMOKINE ACTION ON NON-LEUKOCYTIC CELLS
A. Baird

CHEMOKINES IN DISEASE
P. Libby

GENETIC MODELS OF CHEMOKINE ACTION
TBA

EMERGING ISSUES IN CHEMOKINE RESEARCH
C. Gerard

CHEMOTHERAPY OF EXPERIMENTAL AND CLINICAL CANCER

QUEEN'S COLLEGE, OXFORD UNIVERSITY
SEPTEMBER 15 - 20, 1996

John A. Hickman, *Chair*
Annette K. Larsen / Scott Kaufmann, *Co-Vice Chairs*

APOPTOSIS - OPPORTUNITIES FOR INTERVENTION
C. Dive
J. Reed / R. Brown / R. Miesfeld

BCL-2 AND FAMILY MEMBERS IN DISEASE AND AS PROGNOSTIC INDICATORS
J. Reed
T. McDonnell / A. Bedi / A. Harris

CELL CYCLE CHECKPOINTS AND DNA DAMAGE RECOGNITION
P. O'Connor
T. Wienert / C. Prives / S. Friend

WHY ARE SOME TUMORS CHEMOSENSITIVE?
H. Calvert
S. Howell / C. Chresta / P. Houghton

BREAST CANCER
N. Davidson
B. Ponder / N. Hynes / C. Streuli

CLINICAL PROGRESS IN BREAST CANCER
D. Barnes
G. Bonadonna / V. C. Jordan

CELL SIGNALS: OPPORTUNITIES FOR INTERVENTION
P. Workman
D. Green / G. Powis / S. Courtniedge

TRANSLATIONAL CANCER RESEARCH
P. Nurse

ANGIOGENESIS AS A THERAPEUTIC TARGET
A. Larsen
R. Bicknell / N. Ferrara / L. Holmgren

COMPOSITION, STRUCTURE AND DYNAMICS OF THE EARTH'S INTERIOR (NEW)

PLYMOUTH STATE COLLEGE
JUNE 30 - JULY 5, 1996

Gerald Schubert / J. Michael Brown, *Co-Chairs*

MAPPING EARTH'S INTERIOR
T. Jordan
S. Grand / A. Dziewonski

THE FATE OF SLABS
K. Creager
R. Van Der Hilst / E. Takahashi / C. Litgow-Bertelloni

PATTERNS OF MANTLE CONVECTION
L. Kellogg
J. Phipps Morgan / P. J. Tackley / I. Jackson

GEOCHEMICAL RESERVOIRS AND MANTLE MIXING
D. Anderson
R. Carlson / U. Christensen

PLATES AND MANTLE CONVECTION
D. Bercovici
M. Gurnis / S-I. Karato / Y. Ricard

POSTERS AND VIDEOS
B. Romanowicz

DYNAMICS OF THE CORE
D. Loper
D. Gubbins / G. Masters / P. Olson

UNRESOLVED PROBLEMS
R. O'Connell
D. Turcotte / R. Jeanloz

COMPUTATIONAL CHEMISTRY

NEW HAMPTON SCHOOL
JUNE 30 - JULY 5, 1996

Tomas Halgren, *Chair*
Jeffry Madura, *Vice Chair*

ADVANCES IN MOLECULAR MECHANICS AND DYNAMICS: METHODS AND APPLICATIONS
D. York
T. Darden / B. Berne

BEYOND CONVENTIONAL MOLECULAR MECHANICS
T. Halgren
R. Levy / N. Gresh / B. Brooks

CRITICAL ANALYSIS OF METHODOLOGY FOR FREE-ENERGY CALCULATIONS
B. Bush
P. Kollman / D. Pearlman / W. van Gunsteren

QUANTUM MECHANICAL MODELING OF MOLECULAR SOLVATION
B. Jorgensen
C. Cramer / J. Tomasi

ADVANCES IN QUANTUM CHEMISTRY: METHODS AND APPLICATIONS
G. Fitzgerald
R. Friesner / B. Johnson / M. Zerner

DISCUSSION ON ELECTROSTATICS/CONTINUUM MODELS
J. Madura

NON-PROTEIN POLYMERS
J. McKelvey
R. Pachter / T. Stouch / T. Schlick

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

COMPUTER ASSISTED DRUG DESIGN AND DISCOVERY
M. Murcko
M. Miller / J. Åqvist

CORRELATED ELECTRON SYSTEMS (NEW)

PLYMOUTH STATE COLLEGE
JULY 21 - 26, 1996

Gordon Thomas / Zlatko Tesanovic, *Co-Chairs*
Laura Greene, *Vice Chair*

HIGH-TEMPERATURE SUPERCONDUCTIVITY
P. W. Anderson / J. Orenstein

COLOSSAL MAGNETO-RESISTANCE
A. J. Millis / A. Ramirez

LOW-DIMENSIONAL QUANTUM MAGNETS
R. N. Bhatt / T. M. Rice

METAL-INSULATOR TRANSITIONS
S. A. Carter / T. F. Rosenbaum

FULLERENES
E. Mele

MESOSCOPIC SYSTEMS
M. Tinkham / D. Ralph

SUPERCONDUCTOR-INSULATOR TRANSITION
R. C. Dynes / P. Xiong

NON-FERMI LIQUIDS
M. B. Maple

CORROSION - AQUEOUS

COLBY-SAWYER COLLEGE
JULY 7 - 12, 1996

William Smyrl, *Chair*

OXIDE FILMS ON METALS AND THEIR BREAKDOWN
M. J. Toney / P. Schmuki / M. Seo / G. T. Burstein

LOCALIZED BREAKDOWN OF PASSIVE FILMS AND MICROSCOPIC TECHNIQUES FOR STUDY
E. McCafferty / R. Alkire / J. W. Schultze / P. James

COATINGS AND CORROSION PROTECTION
P. L. Bonora / C. Jaffcoat / S. Tait / R. Buchheit

CORROSION IN ELECTRONIC AND COMMUNICATION SYSTEMS
R. Frankenthal / V. Brusic

MECHANICAL AND CHEMICAL EFFECTS ON OXIDE FILM ADHESION AND FRACTURE
W. W. Gerberich / D. J. Duquette

DIAMOND SYNTHESIS

PLYMOUTH STATE COLLEGE
AUGUST 4 - 9, 1996

James E. Butler, *Chair*
Karen Gleason, *Vice Chair*

GROWTH MECHANISMS
S. Harris
J. E. Butler / M. Frenklach / D. Gruen

POSTER INTRODUCTIONS
K. Gleason

SURFACE PROCESSES
B. Thoms
J. Foord / T. Frauenheim / TBA

IN SITU DIAGNOSTICS
R. Woodin
J. Jefferies / T. Owano

DEFECTS IN DIAMONDS
R. Davis
A. Zeitsev / J. P. Freidel Sellschop / M. Stoneham

CRYSTALLINE TEXTURE AND EPITAXY
J. Steeds
P. Koidl / H. Kawarada

ELECTRON EMISSION
P. Pehrsson
J. Twitchell / T. Humphries / TBA

NUCLEATION AND ELECTROCHEMISTRY
J. Angus
B. Stoner / R. Tenne

RELATED MATERIALS
S. Prawer
W. Yarbrough / L. Chang Chen / TBA

DNA ALTERATIONS IN TRANSFORMED CELLS (NEW)

TILTON SCHOOL
JUNE 30 - JULY 5, 1996

Alan Pinter / Janos Minarovits, *Co-Chairs*
Melanie Ehrlich, *Vice Chair*

POINT MUTATION HOT SPOTS AND P53
W. P. Bennett
D. E. Brash / M. Hollstein / G. P. Pfeifer

CHEMICAL MODIFICATION OF DNA AND REPAIR
J. Jiricny
D. H. Phillips / M. F. Rajewsky

CHEMICAL MODIFICATION OF DNA AND TRANSFORMATION
T. Lindahl
B. Demple / P. Karran / H. Yamasaki

THE ROLE OF DNA METHYLATION IN MALIGNANT TRANSFORMATION I
M. Ehrlich
S. B. Baylin / A. P. Feinberg

THE ROLE OF DNA METHYLATION IN MALIGNANT TRANSFORMATION II
W. Doerfler
P. Jones / J. Jiricny / J. Minarovits

GENOME INSTABILITY AND MUTATOR GENES
M. Peruchko
B. Liu / H. te Riele

CHROMOSOMAL REARRANGEMENTS AND ALLELIC LOSSES
G. Klein
I. T. Magrath / G. M. Hampton / M. Ehrlich

TELOMERIC REPEATS, EXTRACHROMOSOMAL ELEMENTS, AMPLIFICATION AND LOSS OF DNA
H. zur Hausen
B. Andrews / G. R. Stark

ONCOGENIC PROCESSES IN TRANSGENIC AND KNOCKOUT ANIMALS
J. C. Barrett
W. A. Held / M. J. Haas / L. Jackson-Grusby

DRUG METABOLISM

HOLDERNESS SCHOOL
JULY 7 - 12, 1996

Terrence J. Monks, *Chair*
Ronald E. White, *Vice Chair*

PHARMCOGENETICS AND CANCER CHEMOTHERAPY
B. Evans
D. J. Waxman / F. J. Gonzalez / W. E. Evans

PHARMACOGENETICS OF THE GLUTATHIONE-S-TRANSFERASE
P. J. van Bladeren
B. Ketterer / D. L. Eaton

DRUG METABOLISM IN THE BRAIN
H. W. Strobel
H. Kawashima / J.-F. Ghersi-Egea / A. J. Cooper

DRUG METABOLISM AS A DETERMINANT OF DRUG TOXICITY
D. J. Jollow
A. K. Cho / N. Castagnoli

PHASE III METABOLISM: THE EXPORT OF DRUG METABOLITES
T. J. Monks
P. Borst / J. A. Silverman / M. Vore

DRUG METABOLISM DATA BLITZ
S. S. Lau

DRUG METABOLISM IN DRUG DISCOVERY & DRUG DEVELOPMENT
B. R. Smith
B. R. Smith / A. D. Ayrton / M. C. Dyroff

KEYNOTE LECTURE
A. Y. H. Lu

TECHNOLOGICAL ADVANCES IN DRUG METABOLISM
R. E. White
J. K. Nicholson / D. E. Murnick

DYNAMICS OF SIMPLE SYSTEMS

PROCTOR ACADEMY
AUGUST 11 - 16, 1996

R. Stephen Berry, *Chair*
Colston Chandler, *Vice Chair*

ULTRACOLD AND ULTRASLOW PHENOMENA
K. Burnett / J. Weiner / D. Pritchard

NEW DEVELOPMENTS IN CHIRALITY
J. Friar / T. Walcher

EXPERIMENTS ON FEW-BODY SYSTEMS
M. Miller / H. Walther / J. Matthews / D. Zajfman

EXPERIMENTS AND RELATED THEORY
J. Moore / C. Dal Cappello / B. M. K. Nefkens

RELATIVISTIC EFFECTS AND THEORIES
J. Tjon / A. Stadler / I. Afnan / J. Babb / B. Kiester

QUANTUM MONTE CARLO METHODS
J. Carlson / J. Doll

QUANTUM CONTROL
R. Gordon / S. Rice

REVIEW OF 3-BODY CALCULATIONS
W. Gloeckle

TRAPPED CLUSTERS AND MOLECULES
L. Woeste / S. Anderson

ELECTRODEPOSITION (NEW)

COLBY-SAWYER COLLEGE
AUGUST 11 - 16, 1996

Jan Talbot, *Chair*
Gery Stafford, *Vice Chair*

CHARACTERIZATION AND PROPERTIES OF SURFACES
R. Penner
A. Gewirth / J. Stickney

FUNDAMENTALS / ELECTROCRYSTALLIZATION
T. Franklin
S. Armyanov / R. Adzic / Z. Nagy

DEPOSITION OF NEW MATERIALS / NANOSTRUCTURES
D. Lashmore
T. Moffat / J. Switzer / M. Sailor

ALLOY DEPOSITION
J. Talbot
P. C. Andricacos / S. Kounaves / E. Podhala

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

MODELING
J. Dukovic
A. West / M. Matlosz / J. Fransaer

ELECTROLESS DEPOSITION
K. Weil
T. Osaka / W. Dressick / Y. Shacham-Diamand

ANALYTICAL METHODS FOR ELECTRODEPOSITION PROCESS CONTROL
G. Whitney
D. Scherson / D. Schwartz

ELECTRON DONOR ACCEPTOR INTERACTIONS

SALVE REGINA UNIVERSITY
AUGUST 11 - 16, 1996

Gary B. Schuster, *Chair*
Marshall D. Newton, *Vice Chair*

MATERIALS
J. Caspar / K. Kitamura / C. Kubiak / P. Piotowiak

INTERFACES
A. Bard / C. Creager / T. Matsuo

THEORY
M. Ratner / S. Shaik / A. Stuchebrukov

NUCLEIC ACIDS
A. Harriman / H. Thorpe

ENZYMES
T. Begley / D. Falvey / P. Heelis

RADICAL IONS
F. Lewis / S. Nelsen / H. Roth / J. Verhoeven / M. Wasielewski

ELECTRON SPECTROSCOPY

NEW ENGLAND COLLEGE
JULY 7 - 12, 1996

Neville Smith, *Chair*
Denise Caldwell, *Vice Chair*

HIGHLY CORRELATED MATERIALS
J. Allen / R. Claessen / D. Dessau / A. Fujimori / P. Johnson

SPECTROMICROSCOPY AND PHOTOELECTRON DIFFRACTION
H. Ade / E. Bauer / A. Bradshaw / C. Brundle / J. Osterwalder

ATOMS AND MOLECULES
N. Berrah / S. Southworth / S. Svensson / D. Thomas / M. White

ELECTRONIC PROCESSES IN ORGANIC MATERIALS

PROCTOR ACADEMY
JULY 21 - 26, 1996

Glen Kepler, *Chair*
Shaul Mukamel, *Vice Chair*

ENERGY TRANSFER IN THE REACTION CENTER
S. Mukamel
V. Sundstrom / R. Van Grondelle

CONJUGATED POLYMERS I
L. Rothberg
D. Bradley / Z. Vardeny / W. Torruellas

CONJUGATED POLYMERS II
Z. Soos
A. Girolando / G. Weiser

EXCITONS IN CONFINED SPACES
G. Small
D. Chemla / S. Forrest / C. Taliani

J-AGGREGATES
A. Muenter
D. Wiersma / K. Yoshihara

SINGLE MOLECULE/NEAR-FIELD OPTICAL SPECTROSCOPY
W. Moerner

CHARGE TRANSPORT
H. Bässler
D. Emin / P. Borsenberger

METAL/ORGANIC INTERFACES - ELECTRICAL CONTACTS
M. Abkowitz
J. Bredás / C. Harris / H. Schenk

RECENT DEVICE DEVELOPMENTS
J. Swalen
Y. Yang / A. Dodabalapur / M. Rubner

ENERGETIC MATERIALS

NEW HAMPTON SCHOOL
JUNE 16 - 21, 1996

Jimmie C. Oxley, *Chair*
Steve Coffey / Anatoly Dremin, *Co-Vice Chairs*

DATA COLLECTION IN FAST REACTIONS
R. Behrens
J. Rice / T. Russell / V. Pepekin / B. Kondrikov

ENERGETIC MATERIAL SYNTHESIS
J. Botaro
M. Hiskey / B. Chapman / S. Prakash

ENERGETIC MATERIAL SYNTHESIS
P. Pagoria
A. Marchand / R. Millar / M. Coburn

INITIATION AND DETONATION MODELS
C. Melius
J. Gilman / B. Kunz / M. Nicol / J. Shepard

ENERGETIC POLYMERS
T. Archbald
B. Wardle / G. Manzer / D. Thompson

EXPERIMENTAL EXAMINATION OF DETONATION AND COMBUSTION
R. Simpson
B. Asay / J. Foster / M.-C. Lin

NON-IDEAL EXPLOSIVES
D. Dlott
J. Lee / S. Stewart / J. Forbes

PROPELLANT COMBUSTION
T. Brill
T. Litzinger / V. Yang / M. Beckstead

APPLIED EXPLOSIVES CHEMISTRY
M. McBride
A. Aradi / J. Conkling / R. Strobel

ENVIRONMENTAL SCIENCES: WATER

NEW HAMPTON SCHOOL
JUNE 23 - 28, 1996

Alan Stone, *Chair*
Ken Nealson, *Vice Chair*
Rebecca Dickhut, *Poster Chair*

MICROBIAL TRANSFORMATIONS IN SOILS AND SEDIMENTS
W. Ghiorse
J. Zaccara

MASS TRANSPORT EFFECTS ON CHEMISTRY AND MICROBIOLOGY
L. Lion
J. Davis

PHYTOPLANKTON METAL UPTAKE
J. Moffett / G. Morel

NATURAL AND INDUCED MICROBIAL POPULATION CHANGES
D. Stahl / D. Dwyer

POLLUTANT BIOCHEMISTRY
P. Tratnyek
C. Castro

UV IRRADIATION, DISSOLVED ORGANIC CARBON AND BIOTA
Diane McKnight
K. Mopper / M. Moran / C. Williamson

DISTRIBUTION AND TRANSPORT OF BACTERIA AND VIRUSES
A. Camper
J. Rose / B. Logan

MOVEMENT OF CONTAMINANTS THROUGH TROPHIC LEVELS
R. Hecky
J. Baker / D. Broman / R. Sterner

SURFACTANTS
B. Brownawell
J. Field / C. Jafvert

ENVIRONMENTALLY BENIGN ORGANIC SYNTHESIS (NEW)

NEW ENGLAND COLLEGE
JULY 21 - 26, 1996

Paul T. Anastas, *Chair*
Stephen C. DeVito, *Vice Chair*

EXAMPLES OF ENVIRONMENTALLY BENIGN ORGANIC SYNTHESES
B. Trost / L. Paquette / R. Waymouth / S. Buchwald / J. Warner

ENVIRONMENTALLY FAVORABLE CATALYSIS
R. Breslow / T. Collins / B. Sharpless / W. F. Hoelderich / P. A. Jacobs

BIOFEEDSTOCKS AND BIOTRANSFORMATIONS
J. Frost / T. Hudlicky / R. Gross

SUPERCRITICAL FLUIDS
J. DeSimone / J. Tester

ENVIRONMENTALLY BENIGN ORGANIC SYNTHESIS
G. Epling / R. S. Drago / G. Kraus

COMPUTER-ASSISTED DESIGN OF ENVIRONMENTALLY FAVORABLE SYNTHESES
J. Hendrickson

21ST CENTURY RESEARCH IN ENVIRONMENTALLY BENIGN ORGANIC SYNTHESIS
Roundtable Discussion

GENERAL TRENDS IN ENVIRONMENTALLY BENIGN ORGANIC SYNTHESIS
W. Tumas / P. Tundo

ENZYMES, COENZYMES AND METABOLIC PATHWAYS

KIMBALL UNION ACADEMY
JULY 14 - 19, 1996

David E. Cane / Michael A. Marletta, *Co-Chairs*
Carol Fierke, *Vice Chair*

FRONTIERS OF ENZYMOLOGY
C. Walsh / G. Petsko

RADICAL ENZYMES
J. Stubbe / J. Lipscomb / R. Banerjee / P. Frey

ENZYME MECHANISMS
D. Arigoni / B. Imperiali / C. Abell

NATURAL PRODUCT ENZYMOLOGY/GENETICS
C. Khosla / M. Marahiel / T. Kutchan / D. Poulter

SIGNAL TRANSDUCTION
S. Taylor / Z. Zhang / G. Verdine

REDOX ENZYMOLOGY
G. Babcock / S. Yoshikawa / D. Flint

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

ENZYMES IN DISEASE
P. Lansbury / D. Bramhill / M. Levy

EVOLUTION OF CATALYSIS
T. Scanlon / D. Bartell

PROTEIN ENGINEERING
C. Craik / W. DeGrado

see:
http://www.chem.brown.edu/ecmp_grc_1996

FRACTALS
NEW ENGLAND COLLEGE
JUNE 16 - 21, 1996

Michael Shlesinger, *Chair*
Jens Feder, *Vice Chair*

NOVEL APPLICATIONS
R. Voss
A. Carasso / K. Schowalter / M. Teich

AGGREGATION
P. Meakin
F. Argoul / A. Hubler

NONLINEAR DYNAMIC
R. Cawley
L. Pecora / N. Frankel / G. Zaslavsky

OCEAN WAVES
J. Willemsen
B. West / A. Osborne

MATERIALS
T. Vicsek
F. Axel / B. Sapoval / B. Oshaunessey

TURBULENCE
G. Hentschel
K. Sreenivasan / Z. She

BIOLOGICAL SEQUENCES
G. Stanley
A. Mandell / A. Arneodo / S. Havlin

GENERAL LECTURE
B. Mandelbrot
M. Batty

WORLD OF FRACTALS
F. Family
L. DeCola / C. Evertsz / B. Mandelbrot

GLASS
TILTON SCHOOL
JUNE 23 - 28, 1996

George H. Sigel, Jr., *Chair*
Carlo G. Pantano, *Vice Chair*

GLASS SURFACES / CHARACTERIZATION
Carlo G. Pantano
M. J. Matthewson / F. Cruezet / M. Tomozawa

GLASS PROCESSING AND FORMING
J. Wenzel
F. E. Woolley / C. Russel / W. LaCourse

ACTIVE GLASSES/BIOMEDICAL GLASSES
C. Moynihan
D. N. Payne / E. Pope

NON-OXIDE GLASSES
K. Richardson
J. Lucas / P. Tick / J. Sanghera

DEFECTS AND COMPACTION IN SILICA GLASSES
G. H. Sigel, Jr.
T. Seward / U. Fotheringham

PHOTOSENSITIVE GLASSES
K. O. Hill
J. H. Simmons / J. Albert / P. Russell

NON-LINEAR OPTICAL GLASSES
D. Krol
S. Fleming / F. Ouellette / R. Magruder

APPLICATIONS OF PHOTONIC GLASSES
A. Bruce
K. Hirao / S. Houde-Walter / H. Hosono

AFTER DINNER SPEAKER:
Representative -
The Corning Museum of Glass
Glass Through the Ages

GLYCOLIPIDS AND SPHINGOLIPIDS
GIFU, JAPAN
SEPTEMBER 29 - OCTOBER 4, 1996

Yoshitaka Nagai, *Chair*
Sarah Spiegel, *Vice Chair*

RECOGNITION, CELL ADHESION AND CELLULAR PROCESSES I
N. Taniguchi / D. Marcus
N. Taniguchi / G. Schwarting / R. Kannagi

RECOGNITION, CELL ADHESION AND CELLULAR PROCESSES II
R. Kannagi / R. K. Yu
C. A. Lingwood / P. Fredman / R. Schnaar

TRANSMEMBRANE SIGNALING I
Y. A. Hannum / R. Bell
J. Shayman / R. Kolesnick / Y. Kozutsumi

STRUCTURAL GLYCOBIOLOGY AND GLYCOTECHNOLOGY
T. Ogawa / R. Laine
A. Hasegawa / S. Homans / J. C. Paulson / O. Hindsgaul

TRANSMEMBRANE SIGNALING II
A. Merrill / K. Sandhoff
S. Spiegel / S. M. Mandala / T. Mutoh

CONTROL OF CELL GROWTH, DIFFERENTIATION AND APOPTOSIS
M. Saito / S. Hakomori
S. Hakomori / Y. Sanai / S. Chatterjee

MOLECULAR APPROACH OF GLYCOSYLTRANSFERASES
H. Narimatsu / J. C. Paulson
J. B. Lowe / S. Tsuji / Y. Hirayabashi

TRAFFICKING, SORTING, SUBCELULAR LOCALIZATION AND SHEDDING
R. E. Pagano / G. Tettamanti
W. W. Young / R. E. Pagano / S. Ladisch

GENE-MANIPULATION OF GLYCOLIPID METABOLISM
K. Suzuki / A. Suzuki
K. Furokawa / R. Proia / B. J. Popko / K. Sandhoff

GRAVITATIONAL EFFECTS ON LIVING SYSTEMS
COLBY-SAWYER COLLEGE
JULY 14 - 19, 1996

Manning Correia, *Chair*
Michael Evans, *Vice Chair*

GENERAL CELLULAR MECHANISMS
M. Kaetzel / L. Feldman
H. Rasmussen / C. Otey / N. Wang / G. Karlin-Neumann / J. Dedman / S. Roux

ION CHANNELS
R. A. Eatock / F. Sack
F. Sachs / B. Pickard / P. Nick / A. Wiltink / M. Lebert / C. Morris / R. Fettiplace / O. Hamill

GENETIC ANALYSIS
M. Kernan / P. Masson
C. Kung / R. Hangarter / M. Chalfie / M. Bennett / T. Lomax

SENSORY / MOTOR CELLULAR / MOLECULAR SPECIFICITY
D. Corey / A. Sievers
J. Kaplan / H. Ishikawa / S. Gilroy / K. Hasenstein / A. Grinnell

FUTURE OF GRAVITATIONAL BIOLOGY
R. Cleland / L. Young

See www page:
http://galileo.utmb.edu/

HEMOSTASIS
PROCTOR ACADEMY
JUNE 9 - 14, 1996

Paula Tracy, *Chair*
J. Evan Sadler, *Vice Chair*

GENETIC MODELS OF HEMOSTASIS AND VASCULAR BIOLOGY
E. Sadler
R. Rosenberg / J. Degan / A. Beaudet / S. Coughlin

PROTEASE-ACTIVATED RECEPTORS
L. Brass
P. Andrade-Gordon / M. Runge / D. Cunningham / TBA

STRUCTURAL DETERMINANTS OF PROTEASE SPECIFICITY
C. Esmon
T. Mather / E. Madison / W. Bode / D. Banner

NOVEL ASPECTS OF THE COAGULANT RESPONSE
M. Nesheim
J. Jesty / M. Hoffman / L. Bajzar / P. Neuenschwander

HOW TO STOP A CLOT
N. Esmon
G. Vlasuk / S. Krishnaswamy / J. Weitz

TRANSCRIPTIONAL REGULATION OF BLOOD COAGULATION FACTORS
K. High
G. Brownlee / H-L. Hung / TBA

FLUID DYNAMIC REGULATION OF COAGULATION
Z. Ruggeri
B. Savage / C. van't Veer / TBA

LIGANDS AND THEIR RECEPTORS
D. Altieri
D. Altieri / J. Yang / C. Esmon

KEYNOTE: MEGAKARYOCYTES-THEIR PRECURSORS AND THEIR PROGENY
K. Kaushansky

HETEROCYCLIC COMPOUNDS
NEW HAMPTON SCHOOL
JULY 7 - 12, 1996

P. J. Reider, *Chair*
W. H. Pearson, *Vice Chair*

A. Alexakis / P. Aristoff / K. Chapman / A. Charett / D. L. Comins / D. A. Evans / M. Faul / P. Feldman / T. Gallagher / R. Ghadiri / J. M. Kane / S. Kobayashi / S. V. Ley / D. Liotta / G. A. Molander / S. D. Rychnovsky / B. M. Trost

HIGH PERFORMANCE POLYMERIC MATERIALS
PLYMOUTH STATE COLLEGE
JULY 7 - 11, 1996

Richard J. Farris, *Chair*
Walter Bradley, *Vice Chair*

A KINETIC MODEL OF POLYMER COMBUSTION
R. Lyon

POLYBENZOXAZINES
K. Ishida

ALUMINOSILICATE POLYMERS FOR ULTRA-HIGH TEMPERATURE STRUCTURAL APPLICATIONS
J. Davidovits

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

DEFORMATION AND FRACTURE OF THERMOSETS IN CONFINING STRESS STATES
A. Lesser

SCIENCE ON THE SPACE SHUTTLE: THE UNITED STATES MICROGRAVITY LABORATORY MISSION
C. Coleman

LONG TERM ENVIRONMENTAL DURABILITY OF THERMOSETS
R. Kander

HIGH TEMPERATURE THERMOSETS
C. Sheppard

STRUCTURE-PROPERTY RELATIONSHIPS OF BISMALEIMIDE THERMOSETS
R. Morgan

NETWORK STRUCTURE OF EPOXIES WITH LONG AND SHORT CHAINS
W. Wu

MORPHOLOGY AND FRACTURE MECHANISMS IN LIQUID CRYSTALLINE EPOXIES
H. Sue

DUAL CURE ACRYLATE/EPOXY INTERPENETRATING POLYMER NETWORKS
C. DiFrancia / C. Schuft

COMPARISON OF PROPERTIES FOR THERMAL AND RADIATION CURE THERMOSETS
G. Palmese

HIGH PERFORMANCE POLYMER DISPERSED LIQUID CRYSTALS FOR AEROSPACE APPLICATIONS
W. Adams / T. Bunning

THE EFFECT OF ORGANIZATION ON THE PROPERTIES OF LIQUID CRYSTALLINE THERMOSETS
C. Ober

1,2-DIMETHYLENECYCLOBUTANE IN BISMALEIMIDES AND OTHER THERMOSET POLYMER SYSTEMS
S. Corley

HIGH TEMPERATURE CHEMISTRY

TILTON SCHOOL
JULY 21 - 26, 1996

Jimmie G. Edwards, *Chair*
James L. Gole, *Vice Chair*

ADVANCED HIGH TEMPERATURE SOLIDS
T. Devore
A. Navrotsky / H. Iwahara / A. Chang

NEW METHODS AND APPLICATIONS IN HIGH TEMPERATURE CHEMISTRY
Y. Laurent
R. Devonshire / G. Calas

THERMAL PROCESSING OF RADIOACTIVE WASTE I
J. Kolts
C. M. Jantzen / A. Jouan / J. Hnat

THERMAL PROCESSING OF RADIOACTIVE WASTE II
G. Kessinger
B. Ebbinghouse / T. Ligney

HIGH TEMPERATURE CHEMISTRY IN SMALL BUSINESSES I
R. Weber
E. Smelik / C. Khattak / S. Varma

HIGH TEMPERATURE CHEMISTRY IN SMALL BUSINESSES II
C. Hauer
B. Johnson / H. Calcote

HIGH TEMPERATURE PROBLEMS IN SUBMICRO- AND NANO-TECHNOLOGY I
W. Roman
B. Walden / D. Vollath / T. Bernecki / J. Gole

THE HIGH SPEED CIVIL TRANSPORT
N. Jacobson
R. J. Shaw

HIGH TEMPERATURE PROBLEMS IN SUBMICRO- AND NANO-TECHNOLOGY II
J. Gole
B. Kear / W. Roman / M. Zachariah

HORMONAL AND NEURAL PEPTIDE BIOSYNTHESIS

NEW HAMPTON SCHOOL
JULY 28 - AUGUST 2, 1996

Donald F. Steiner, *Chair*
Betty Eipper, *Vice Chair*

FOLDING AND ACTIVATION OF PROTEINS IN THE SECRETORY PATHWAY
P. Arvan
P. Bryan / I. Boime / G. Martens

CONVERTASE STRUCTURE / FUNCTION - ENZYMOLOGY
R. Fuller
I. Lindberg / N. Seidah / M. Ballinger

SORTING AND SECRETORY GRANULE TARGETING
G. Thomas
S. Emr / D. Castle

REGULATION/COORDINATION OF SECRETORY GRANULE FUNCTION
J. Hutton
B. Eipper / C. Rhodes / P. Arvan

ASSEMBLY OF SECRETORY GRANULES
D. Shields
W. Huttner / S. Milgram

NON-CLASSICAL SECRETION/ACTIVATION MECHANISMS
I. Lindberg
D. K. Miller / C. Boone / C. Ryan

NOVEL ENZYMES INVOLVED IN PRODUCING REGULATORY PEPTIDES
R. Skidgel
E. Leiter/L. Fricker / L. Hersh / P. Loh

CLINICAL ASPECTS / THERAPEUTIC APPLICATIONS
N. Seidah
S. O'Rahilly / J. Hicks / E. Kuismanen / M. Zasloff

WHAT DEFINES THE NEUROENDOCRINE PHENOTYPE?
M. Chrétien
P. Taghert / R. Day

HORMONE ACTION

KIMBALL UNION ACADEMY
JULY 28 - AUGUST 2, 1996

Jacques Drouin, *Chair*
Kelly Mayo, *Vice Chair*

CHROMATIN AND HORMONE ACTION
A. Wolffe / M. Beato

HORMONES IN DEVELOPMENT
P. Chambon / O. Conneely

INSULIN GENE AND INSULIN REACTION
J. Olefsky / N. Sonenberg / M. J. Tsai

HORMONES AND CONTROL OF PROLIFERATION
M. Karin / C. Prives

LIPID METABOLISM AND OBESITY
J. Friedman / B. Spiegelman

SIGNALING PATHWAYS
B. Groner / P. Mellon

NON-GENOMIC ACTIONS OF STEROIDS
B. McEwen / A. Norman / N. C. Lan

NUCLEAR RECEPTORS AND THEIR ASSOCIATED PROTEINS
M. Parker / D. Moore / V. Giguère

DEVELOPMENT
R. Behringer / G. M. Rosenfeld

INNOVATIONS IN COLLEGE CHEMISTRY TEACHING

PLYMOUTH STATE COLLEGE
JUNE 30 - JULY 5, 1996

Brock Spencer, *Chair*
Stanley H. Pine, *Vice Chair*

REVITALIZING INTRODUCTORY CHEMISTRY COURSES
A. B. Ellis
G. L. McLendon / K. W. Zilm

NEW PERSPECTIVES ON TEACHING ORGANIC CHEMISTRY
J. K. Whitesell
M. A. Fox / J. R. Mohrig / S. H. Pine / R. Rusay

NEW PERSPECTIVES ON TEACHING ANALYTICAL CHEMISTRY
G. Lisensky
J. C. Wright / K. D. Hughes

NSF SYSTEMIC CHANGE INITIATIVES
S. Hixson
G. E. Peace, Jr. / D. K. Gosser / B. Sawrey / B. Spencer

CHEMISTRY AND THE PUBLIC
S. Ware
D. N. Harpp / J. D. Kovac

SCIENCE EDUCATION RESEARCH
S. H. Pine
M. B. Nahkleh / M. M. Cooper

CHEMICAL WORKFORCE ISSUES
R. L. Lichter
A. McDermott / D. Lavallee

TECHNOLOGY AND CURRICULAR CHANGE
A. M. Stacy
J. R. Jungck / N. J. Turro

COGNITIVE SCIENCE: WHAT CAN WE USE FROM KNOWING HOW PEOPLE LEARN?
B. Sawrey
C. Bowen / D. Gabel

INORGANIC CHEMISTRY

NEW ENGLAND COLLEGE
JULY 21 - 26, 1996

David L. Thorn, *Chair*
Andrew Barron, *Vice Chair*

COORDINATION CHEMISTRY: A CELEBRATION OF VARIED COORDINATION ENVIRONMENTS
N. de Vries
F. Feher / H. Schwarz / C. Cummins

MAIN-GROUP AND CLUSTER CHEMISTRY
S. Strauss / R. Holm / M. Kanatzidis / M. Bawendi

CATALYSIS AND CATALYSTS
R. Kemp / E. Bordes / J. Canich

SURFACES, PARTICLES, AND MORE CLUSTERS
N. Herron / M. Sailor / K. Klabunde / T. Turney

DEPOSITION CHEMISTRY
A. Barron
W. Gladfelter / C. Winter / A. Jones

COORDINATION CHEMISTRY: ELECTRONS, PHOTONS, AND RADICALS
K. Dunbar
D. Nocera / D. Tyler / A. Vogler / C. Grissom

INORGANIC CHEMISTRY IN BIOLOGICAL SYSTEMS
J. Barton / J. Kovacs / S. Cunningham

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

NEW SOLIDS
R. Haushalter / N. Bartlett / M. Whangbo / D. Mitzi

SOMETHING DIFFERENT
F. Via / J. Labinger

INTERACTIONS OF WATER WITH SURFACES

PLYMOUTH STATE COLLEGE
JULY 28 - AUGUST 2, 1996

Frederick T. Wagner, *Chair*
Eric M. Stuve, *Vice Chair*

SOLVATION AND ANION EFFECTS ON INTERFACIAL CHEMISTRY
M. Weaver
B. Conway / J. Lipkowski

AQUEOUS SORPTION AND ENVIRONMENTAL PROTECTION: MINERAL SURFACES
G. Brown
R. Chiarello / M. Hochella / G. Sposito

REACTIONS AT AQUEOUS / METAL INTERFACES: FUEL CELL ELECTROCATALYSIS
S. Gottesfeld
P. Ross / A. Wieckowski

MODIFICATION OF MOLECULAR ADSORPTION BY WATER
G. Pirug
T. Ellis / J. Lousmaa / P. Thiel

WATER ADSORPTION / DESORPTION: FROM BASIC TO APPLIED
B. Kasemo
B. Kay / H. F. Dylla / J. McAndrew

ATMOSPHERIC SURFACE CHEMISTRY AND SORPTION ON / IN ICE
J. Roberts
D. Hanson / J. P. Devlin / J. Hicks

STRUCTURE AND DYNAMICS OF INTERFACIAL WATER
P. Norton
M. Berkowitz / D. Menzel

TRIBOLOGY AND STRUCTURE OF ICE SURFACES
J. T. Dickinson
V. Petrenko

INTERMEDIATE FILAMENTS

HOLDERNESS SCHOOL
JULY 14 - 19, 1996

Michael W. Klymkowsky, *Chair*
Jean-Pierre Julien, *Vice Chair*

EVOLUTION AND STRUCTURE OF INTERMEDIATE FILAMENT PROTEINS & NUCLEAR LAMINS.
U. Aebi
K. Weber / H. Herrmann
N. Hirokawa / H. Worman / C. Hutchison

VIMENTIN & NESTIN: EXPRESSION, ORGANIZATION & FUNCTIONS.
R. Evans
M. Inagaki / G. Gundersen / A. Fulton / C. Babinet / R. Mckay

GFAP & NEURONAL IF MODIFICATIONS
L. Parysek
S. Itohara / M. Pekny
H. Pant / M. Brenner / R. Nixon

NEUROPATHOLOGY & IFS
D. Cleveland
J.-P. Julien / V. Lee / G. Elder / T. Shea / G. Perry

TRANSGENIC STUDIES OF KERATIN FUNCTION
E. B. Lane
H. Baribault / P. Coulombe / T. Magin / B. Omary / B. Dale

KERATINS AND HUMAN DISEASE.
E. Fuchs
D. Roop / I. Mclean / D. Mischke / J. Compton

IF/MEMBRANE INTERACTIONS I
M. Klymkowsky
D. Paulin / D. Garrod / R. Buxton Or T. Magee / O. Skalli

IF/MEMBRANE INTERACTIONS II
P. Cowin
K. Green / S. Troyanovsky / M. Wheelock / W.J. Nelson

CONFERENCE SUMMARY:
R. D. Goldman / W. W. Franke

ION CHANNELS

TILTON SCHOOL
JULY 7 - 12, 1996

B. Bean, *Chair*
E. Stefani, *Vice Chair*

INWARD RECTIFIERS
C. Vandenberg / D. Clapham / J. Bryan

LIGAND-GATED CHANNELS
K. Magleby
D. Weiss / S. Sine / R. A. North

NEW CHANNELS AND MECHANISMS
H. Lester
S. Goldstein / M. Cahalan / T.-Y. Chen

CALCIUM-ACTIVATED POTASSIUM CHANNELS
R. Aldrich
M. Garcia / L. Toro / D. Cox

GATING MECHANISMS AND MOVEMENTS
F. Sigworth
F. Bezanilla / R. Horn / W. Zagotta

PERMEATION AND BLOCK
R.W. Tsien
M. Mayer / G. Yellen / R. Mackinnon

CALCIUM CHANNEL MODULATION
B. Hille
A. Dolphin / T. Snutch / S. Ikeda

CHANNEL REGULATION
I. Levitan
W. Guggino / N. Marrion

KEYNOTE ADDRESS
L. Y. Jan

LASER INTERACTIONS WITH MATERIALS

HOLDERNESS SCHOOL
JUNE 9 - 14, 1996

Tom Dickinson, *Chair*
Richard Haglund, *Vice-Chair*

FS LASER-MATERIALS INTERACTIONS
M. Stuke
G. Mourou / B. Vu

LASER INDUCED PHOTOCHEMISTRY AND ELECTRON EMISSION
H. Helvajian
R. Osgood / R. Williams

PLUME DYNAMICS AND CLUSTER GROWTH
J. Horwitz
K. Murikami / T. Okada

ROLE OF ENERGETIC PARTICLES IN FILM DEPOSITION AND GROWTH
I. Boyd
J. Greene / D. Lowndes

PULSED LASER DEPOSITION: OXIDES AND MAGNETIC MATERIALS
J. Dubowski
C. Afonso / D. Chrisey

CONTROLLED THERMAL PROCESSES
L. Laude
D. Bauerle / C. Grigoropoulos / R. Singh

LASERS IN CHARACTERIZATION OF MATERIALS AND INTERFACES
D. Geohegan
R. Shen / P. Hess

PULSED LASER PROBES OF MATERIALS AND SURFACES; MODELING
R. Kelly
D. Dlott / K. Nelson / R. Wood

APPLICATIONS OF LASERS TO CHEMICAL ANALYSIS
R. Dreyfus
R. Russo / R. Cramer

BOSE-EINSTEIN CONDENSATION IN DILUTE ATOMIC GASES
R. Haglund
W. Ketterle

LASERS IN MEDICINE AND BIOLOGY

KIMBALL UNION ACADEMY
JUNE 30 - JULY 5, 1996

Joseph T. Walsh, Jr., *Chair*
Lawrence Deckelbaum, *Vice Chair*

PHOTODYNAMIC DIAGNOSTICS AND THERAPY
H. van den Berg

CELLULAR LASER EFFECTS
T. Flotte

COHERENCE DOMAIN IMAGING
Z. Izatt

TRANSMYOCARDIAL REVASCULARIZATION
C. Borst

MATRIX-ASSISTED LASER DESORPTION/IONIZATION
F. Hillenkamp

LASER-BASED MICROSCOPY
B. Tromberg

MINIMALLY-INVASIVE AND COSMETIC SURGERY
J. Walsh, A. Vogel

LASERS IN ORTHOPEDICS

PHOTON-MIGRATION IMAGING

LIPID METABOLISM

KIMBALL UNION ACADEMY
JUNE 16-21, 1996

Lawrence L. Rudel, *Chair*
William Smith, *Vice Chair*

APOB IN VLDL ASSEMBLY
S. Young
S. Olof-Olofsson / S. Young / G. Shelness / J. Wetterau

APOA-I AND HDL METABOLISM
L. Curtiss
L. Curtiss / J. Parks / N. Maeda

SELECTIVE UPTAKE AND METABOLISM OF CHOLESTERYL ESTERS
D. Williams
E. Reaven / M. Kreiger / D. Williams / C. Londos

REGULATION OF HEPATIC INTRACELLULAR CHOLESTEROL METABOLISM
L. Rudel
S. Sturley / B. Farese / U. Seedorf

NON-LDL RECEPTOR MEDIATED LIPOPROTEIN UPTAKE
J. Herz
J. Herz / W. Schneider / I. Tabas / T. Yamamoto

GENETIC REGULATION OF STEROL BIOSYNTHESIS
P. Edwards
P. Edwards / T. Osborne / R. Hampton

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

REGULATION OF LIPOPROTEIN LIPASE FUNCTION
I. Goldberg
I. Goldberg / P. Kern / S. Santamarina-Fojo / J. Breslow

AN UPDATE ON THE FACTORS REGULATING OBESITY
J. Freidman

LYSOSOMES
PROCTOR ACADEMY
JUNE 30 - JULY 5, 1996

Stuart Kornfeld, *Chair*
Sandra Schmid / Hans Geuze, *Co-Vice Chairs*

VESICLE FORMATION
T. Stevens
S. Emr / F. Brodsky / P. de Camilli

PROTEIN TARGETING TO LYSOSOMES
P. Arvan
W. Canfield / C. Hopkins

PROTEIN SORTING IN ENDOSOMES
F. Maxfield
M. Birnbaum / S. Corvera

SMALL GTP BINDING PROTEINS IN ENDOSOME FUNCTION
M. Zerial
R. Kahn / S. Pfeffer

CYTOPLASMIC PROTEOLYSIS
F. Dice
J. Monaco / H. Riezman R. Kopito

ANTIGEN PRESENTATION
C. Harding
P. Creswell / J. Bonifacino

ENTRY OF PATHOGENS AND THEIR TOXINS
N. Andrews
K. Sandvig / M. Bomsel / D. Russell

NOVIKOFF LECTURE
R. Brady

NEW UNDERSTANDING OF LYSOSOMAL STORAGE DISEASES
K. von Figura
B. Hoflack / A. d'Azzo / B. Griffiths

MACROMOLECULAR ORGANIZATION AND CELL FUNCTION
QUEEN'S COLLEGE, OXFORD UNIVERSITY
SEPTEMBER 1 - 6, 1996

James Clegg, *Chair*
Douglas Kell / John Wilson, *Co-Vice Chairs*

CELL STRUCTURE
J. Clegg
J. Nickerson / K. Giuliano / F. Mayer

INTRACELLULAR ENVIRONMENT
P. Wiggins
A. Minton / F. Lang

MINIMALLY INVASIVE STUDIES
C. Hardin
R. Lynch / C. Van Noorden / G. Albrecht-Buehler

THEORY AND MODELING OF METABOLISM
G. Welch
P. Mendes / H. Westerhoff

COMPARTMENTATION, COMPLEXES AND CHANNELING - I
J. Wilson
K. Nicolay / T. Wallimann / P. Srere

COMPARTMENTATION, COMPLEXES AND CHANNELING - II
M. Berry
H. Schulz / J. Ovadi

CYTOSKELETON AND MACROMOLECULAR FUNCTION
H. Knull
K. Suprenant / L. Pagliaro / K. Carraway

PROTEIN SYNTHESIZING SYSTEM
M. Deutscher
J. Frank / J. Hesketh

NOVEL PROTEIN-PROTEIN INTERACTIONS
S. Fields
W. Welch / M. Duget / M. Hochstrasser

MAMMALIAN GAMETOGENESIS AND EMBRYOGENESIS
COLBY-SAWYER COLLEGE
AUGUST 11 - 16, 1996

Susan Heyner, *Chair*
John Eppig, *Vice Chair*

GAMETE MATURATION I
G. Gerton
S. L'Hernault / T. Schedl

GAMETE MATURATION II
J. Eppig
H. Leese / K. Swenson / J. Rodger

GENE REGULATION DURING GAMETOGENESIS AND EMBRYOGENESIS I
R. Schultz
M. DePamphilis / A. Wolffe / J.-P. Renard

GENE REGULATION DURING GAMETOGENESIS AND EMBRYOGENESIS II
M. A. Handel
K. H. Kim / S. Esposito / A. Bird

EMBRYONIC STEM CELLS
C. Stewart
B. Skarnes / G. Keller

MORPHOGENS
M. Skinner
L. Niswander / C. Birchmeier / P. Donovan

APPLICATIONS TO HUMAN AND LARGE ANIMAL REPRODUCTION
D. Tasca
A. Handyside / J. Van Blerkom / M. Roberts

CELL-CELL INTERACTIONS
G. Schultz
J. Kidder / Z. Werb

MECHANISMS OF TOXICITY
NEW ENGLAND COLLEGE
JULY 28 - AUGUST 2, 1996

William F. Greenlee, *Chair*
Cheryl L. Walker, *Vice Chair*

CELL CYCLE REGULATION
C. Walker
A. Fornace / G. Peters / T. Tlsty

CELL SIGNALING AND THE MOLECULAR STRESS RESPONSE
J. Steven
S. Kharbanda / J. Kyriakis / J. Stevens

GENETIC RESPONSES TO ENVIRONMENTAL SIGNALS
C. Bradfield
C. Bradfield / E. Bresnick / G. Semenza

LIGAND-INDEPENDENT ACTIVATION OF SOLUBLE RECEPTORS
G. Perdew
L. Allen-Hoffmann / C. Smith / N. Weigel

DNA METHYLATION AND GENE EXPRESSION
J. Goodman
M. Ehrlich / J. Goodman / R. Jaenisch / P. Jones

MOLECULAR SIGNALING AND REGULATION OF CELL GROWTH AND DIFFERENTIATION
Lorraine Gudas
K. Kulik / J. Yuan

NUCLEAR STRUCTURE AND GENE EXPRESSION
G. Stein
S. Penman / G. Stein

FRONTIERS IN MOLECULAR IMAGING
F. Fay
F. Fay / R. Singer / L. Taylor

MEDICINAL CHEMISTRY
COLBY-SAWYER COLLEGE
AUGUST 4 - 9, 1996

Eric Larson, *Chair*
William Greenlee, *Vice Chair*

ADVANCES IN THROMBIN INHIBITORS AS ANTICOAGULANT AND ANTITHROMBOTIC AGENTS
D. Kimball
L. Harker / K. Hilpert / M. Kahn / S. Stone

CYCLOOXYGENASE 2 INHIBITORS
R. Zamboni
M. Kellogg / P. Prasit / D. Morgans

ADVANCES IN DEVELOPMENT OF THERAPEUTIC AGENTS FOR ALZHEIMERS DISEASE
K. Shiosaki
P. Lansbury / M. Holladay / J. Jaen / E. de Souza / B. Munoz

GROWTH HORMONE SECRETAGOGUES
R. Nargund
R. Smith / P. Anderson

NEW THERAPEUTIC STRATEGIES FOR TREATMENT OF OBESITY
E. Sugg
D. Gehlert / A. Weber / M. Heiman

CORTICOTROPIN-RELEASING FACTOR
J. McCarthy
P. Gilligan

PROGRESS IN DEVELOPMENT OF ANTIVIRAL AGENTS
D. Aberett
D. Kempf / G. Koszalka

SPECIAL TOPICS IN MEDICINAL CHEMISTRY
B. Balasubramanian

MEIOSIS
COLBY-SAWYER COLLEGE
JUNE 9 - 14, 1996

Shirleen Roeder, *Chair*
Terry Orr-Weaver, *Vice Chair*

REGULATION OF CELL CYCLE PROGRESSION
A. Murray
R. Easton-Esposito / A. Murray / S. Wasserman / T. Weinert

CHROMOSOME PAIRING
N. Kleckner
B. McKee / D. Camerini-Otero / J.-L. Rossignol / A. Villeneuve

SYNAPTONEMAL COMPLEX
S. Stack
H. de Jong / F. Klein / S. Roeder / S. Stack

CHROMOSOME STRUCTURE
U. Laemmli
W. Earnshaw / S. Hawley / U. Laemmli / J. Sedat

RECOMBINATION MECHANISMS
F. Stahl
J. Kohli / M. Lichten / H. Ogawa / T. Petes

REGULATION OF RECOMBINATION
M. Lichten
N. Arnheim / N. Kleckner / F. Stahl / M. Liskay

CHROMOSOME TRANSMISSION
S. Hawley
D. Albertson / T. Hassold / P. Hunt / G. Karpen

SPINDLE STRUCTURE AND CHROMOSOME ALIGNMENT
W. Earnshaw
S. Endow / G. Gorbsky / T. Orr-Weaver / P. Sorger

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

GERM LINE DETERMINATION AND GAMETOGENESIS
R. Braun / M. Fuller / R. Lehmann

MICROBIAL STRESS RESPONSE

HOLDERNESS SCHOOL
JULY 21 - 28, 1996

Janet Westpheling, *Chair*
Peter Setlow, *Vice Chair*

M. Bibb / D. Dean / R. Gourse / C. Gross / A. Grossman / T. Henkin / D. Hodgson / J. Hoch / J. Imlay / R. Kolter / S. Kustu / M. Lindstrom / R. Losick / J. Miller / N. Pace / D. Portnoy / T. Silhavy / M. Simon / J. Slonczewski / J. Theriot

MICROBIAL TOXINS AND PATHOGENESIS

PROCTOR ACADEMY
JULY 14 - 19, 1996

Alison O'Brien, *Chair*
Erik L. Hewlett, *Vice Chair*

PATHOGENICITY ISLANDS AND GENETIC DIFFERENCES BETWEEN PATHOGENS AND NONPATHOGENS
F. Quinn
J. Hacker / J. Kaper / R. Perry

ANTIGENIC VARIATION
J. R. Scott
J. G. Cannon /A. G. Barbour / M. Virji / M. J. Blaser

CHAPERONES AND ESCORTS
S. Straley
G. Cornelis / C. Parsot / S. Hultgren

ACTIVATION, MODIFICATION, AND TRAFFICKING OF TOXINS AND TOXIN RECEPTORS
D. Burns
A. Melton-Celsa / E. Hewlett / J. Almenoff / W. Lencer

SALMONELLA - A TOOL AND WHAT'S NEW
E. Groisman
D. Holden / S. Miller / C. Lee

CYTOSKELATAL REARRANGEMENTS AND CELL SIGNALLING MEDIATED BY TOXINS
B. McClane
A. Aderem / C. Sears / K. Aktories / M. Sugai

STRUCTURE-FUNCTION ANALYSES OF VIRULENCE DETERMINANTS AND REGULATORS
R. K. Holmes
C. Petosa / V. Hol / R. Isberg

IMMUNIZATION: IMMUNE MODULATION, VECTORS, AND NEW APPROACHES
E. Metcalf
C. Elson / M. Jo Wick / R. Munford / S. Johnson

PLANTS, ANTIBODIES, AND VACCINES
Myrone Levine
C. Arntzen / J. Clements

MITOCHONDRIA AND CHLOROPLASTS

PLYMOUTH STATE COLLEGE
JUNE 16 - 21, 1996

Kathleen Newton, *Chair*
Gottfried Schatz, *Vice Chair*

ORGANELLE GENOMES AND GENE TRANSFER
J. Palmer
J. Feagin / J. Palmer / E. Schon

MITOCHONDRIAL MUTATIONS
K. Newton
D. Wallace / L. Kaguni / M. Boutry

RNA EDITING AND ORGANELLE TRANSMISSION
M. Hanson
M. Hanson / M. Yaffe / J. Nunnari

TRANSCRIPTION
D. Clayton
J. Jaehning / M. Gray / L. Allison / G. Attardi

ROUND-TABLE DISCUSSION: PLASTID ENGINEERING - TECHNICAL ISSUES AND BIOLOGICAL PROBLEMS
P. Maliga

POST-TRANSCRIPTIONAL REGULATION
D. Stern
D. Stern / J.-D. Rochaix / J. Mullet / S. Mayfield

TRANSLATION AND ASSEMBLY
T. Fox
T. Fox / F.-A. Wollman / A. Tzagoloff / B. Lemire

NUCLEAR-CYTOPLASMIC INTERACTIONS
R. Butow
R. Butow / R. Scarpulla / G. Brown

PROTEIN IMPORT INTO CHLOROPLASTS
A. Barkan
D. Schnell / J. Soll / K. Cline / A. Barkan

TARGETING AND SORTING OF PROTEINS AND RNA
G. Schatz
K. Mihara / N. Martin / R. Martin

MODELING IN SOLAR-TERRESTRIAL PHYSICS

NEW ENGLAND COLLEGE
JUNE 16 - 21, 1996

Karen Flammer / Dan Baker, *Co-Chairs*

Program information for this conference is not available at this time. For further information contact the chair of the conference at:

Karen Flammer
University of California, San Diego
Department of ECE
9500 Gilman Drive, Dept. 0407
La Jolla, CA 92093

Fax:
619-534-2486

e-mail:
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or

Dan Baker
University of Colorado
Lab for Atmosphere & Space Physics
Campus Box 590
Boulder, Co 80309

Fax:
303-492-6444

e-mail:
baker@orion.colorado.edu

MODELING OF FLOW IN PERMEABLE MEDIA

PROCTOR ACADEMY
AUGUST 4 - 9, 1996

Michael Celia, *Chair*
Thomas Hewett, *Vice Chair*

NEW TECHNOLOGIES
F. Orr
D. Mackay / G. Pope

SMALL-SCALE PROCESSES
L. Ferrand
C. Montemagno / K. Mohanty / J. Zacchara

POROUS MEDIA STRUCTURE
W. Rossen
S. Edwards / J. Lewis

SCALING
M. Blunt
W. Kinzelbach / M. Christie / S. Neuman

BIOGEOCHEMISTRY
C. Miller
R. Harvey / S. Rao

GEOLOGIC MODELING AND FIELD STUDIES
J. Jennings
P. Meakin / J. Long / A. Pulham

UNSATURATED-ZONE PROCESSES
M. Th. Van Genuchten
R. Glass / H. Fluehler

NUMERICAL MODELING
M. Wheeler
E. Sudicky / J. Trangenstein / J. Yeomans

PARAMETER ESTIMATION AND UNCERTAINTY
M. King
A. Datta-Gupta / D. Mclaughlin

MOLECULAR BIOLOGY, DIFFRACTION METHODS IN

PROCTOR ACADEMY
JUNE 16 - 21, 1996

J. W. Pflugrath, *Chair*
C. W. Carter, Jr, *Vice Chair*

CRYSTALLOGENESIS:
Lessons from physics and physical chemistry; defects, optimization.

PRACTICAL CRYSTAL GROWTH:
Special problems associated with membrane proteins and RNA.

IMPROVING CRYSTALS FOR DATA COLLECTION:
Cryocrystallography, determinants of crystal perfection and resolution limits.

INSTRUMENTATION:
Sources and detectors.

EXPERIMENTAL PHASE DETERMINATION:
Maximum likelihood parameter refinement, anomalous dispersion, molecular replacement.

DIRECT PHASE DETERMINATION:
Statistical direct methods, concurrent map interpretation and phase refinement, phase extension.

MODELS:
Automated map interpretation, using databases, and rebuilding.

REFINEMENT I:
New criteria, maximum likelihood, enhancing the radius of convergence, automating peak interpretation.

REFINEMENT II:
Real space algorithms, model bias, solvent models.

OBJECTIVES AND PRESENTATION:
Where will new problems emerge, views from funding agencies, coordinating projects in structural biology.

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

MOLECULAR CELL BIOLOGY

TILTON SCHOOL
JUNE 16 - 21, 1996

David Morgan / Judith White, *Co-Chairs*

CELL CYCLE
S. Reed
D. Morgan / T. Jacks / B. Dunphy

CYTOSKELETON
R. Vale
E. Fuchs / T. Mitchison / J. Spudich

SIGNAL TRANSDUCTION
H. Hamm
C. Klee / B. Errede / J. Massague

CELL BIOLOGY OF DEVELOPMENT
R. Nusse
B. Theurkauf / L. Cooley / D. St. Johnston

CELL ADHESION
M. Bekerle
J. White / B. Gumbiner / D. DeSimone

ORGANELLE DYNAMICS
L. Gerace
I. Mellman / P. Walter / G. Warren

MACROMOLECULAR INTERACTIONS
P. Bjorkman
A. Horwich / S. Hultgren / W. Baumeister

KEYNOTE SPEECH
B. Alberts

MITOSIS
E. Salmon
G. Gorbsky / E. Karsenty / M. Rose

MOLECULAR GENETICS

SALVE REGINA UNIVERSITY
JULY 28 - AUGUST 2, 1996

Winship Herr, *Chair*
Patrick O'Farrell, *Vice Chair*

DYNAMICS OF CHROMOSOME MAINTENANCE
E. Blackburn
T. Baker / T. Hirano / T. Orr-Weaver

LONG-RANGE CIS-REGULATION OF GENE EXPRESSION
S. Tilghman
R. Jaenisch / H. Cedar / V. Chandler / P. Fraser

THE BASAL TRANSCRIPTIONAL APPARATUS
J. Conaway
S. Burley / R. Ebright / R. Young

KICKING DNA REPLICATION INTO GEAR
M. O'Donnell
S. Bell / N. Dyson / B. Dynlacht

RATCHETING THROUGH THE CELL CYCLE
P. O'Farrell
R. King / T. Weinert

PROTEOLYSIS IN LIFE AND DEATH
S. Gottesman
P. Howley / M. Rechsteiner / R. Horvitz / Y. Lazebnik

REGULATION OF TRANSCRIPTION FACTOR ACTIVITY
R. Losick
Z. (James) Chen / B. Graves / S. Hake / E. O'Shea

CHROMATIN IN TRANSCRIPTIONAL REGULATION
R. Kingston
B. Emerson / S. Roth / C. Wu

COMBINATORIAL CONTROL OF TRANSCRIPTION
K. Yamamoto
M. Green / W. Herr / .M. Levine

MOTILE AND CONTRACTILE SYSTEMS

NEW ENGLAND COLLEGE
JULY 7 - 12, 1996

Jonathan Scholey, *Chair*
Mary Beckerle, *Vice Chair*

KEYNOTE LECTURE – MOTILITY AND CONTRACTILITY DURING THE M-PHASE
T. Salmon

STRUCTURE ANALYSIS OF FILAMENT-MOTOR SYSTEMS
R. Milligan
T. Pollard / R. Vale / J. Howard

STRUCTURE-FUNCTION RELATIONSHIPS IN CYTOSKELETAL FILAMENTS
M. Titus
M. Mooseker / J. Scholey / N. Hirokawa / R. Vallee

INTRACELLULAR TRANSPORT AND DYNAMICS OF THE ENDOMEMBRANE SYSTEM
G. Bloom
J. Lippincott-Schwartz / E. Vaisberg / M. Sheetz

THE CYTOSKELETON AND POSITIONAL INFORMATION
J. Pringle
D. Drubin / J. Nelson

SIGNAL TRANSDUCTION AND THE REGULATION OF CYTOSKELETAL FUNCTION
M. Beckerle
K. Burridge / S. Brady-Kalnay / M. Peifer

REGULATION OF ACTIN FILAMENT NUCLEATION, ASSEMBLY AND DYNAMICS
J. Theriot
M. Way / G. Borisy / J. Cooper / U. Walter

MTOCS AND THE REGULATION OF MICROTUBULE ASSEMBLY AND DYNAMICS
S. Dutcher
Y. Zheng / J. Kilmartin / F. McNally / C. Walczak

CYTOKINESIS
D. Kiehart
I. Mabuchi / C. Fields / J. Lutkenhaus

THE CYTOSKELETON IN DEVELOPMENT
T. Hays
K. Kemphues / J. Yost / B. Dalby

PLATFORM PRESENTATION OF SELECTED POSTERS, TUBULIN-RELATED
S. Endow

ACTIN-RELATED
J. Condeelis

MULTIPHOTON PROCESSES

COLBY-SAWYER COLLEGE
JUNE 9 - 14, 1996

Ed Grant, *Chair*
Kenneth Kulander, *Vice Chair*

COHERENT CONTROL
M. Shapiro
W. Warren / R. Garrett / K. Bergmann

ULTRA-SHORT PULSES
P. Corkum
H. Kapteyn / N. Burnett / K. Schafer

HIGH-ORDER HARMONICS
M. White
A. Sanpera / R. Haight

RYDBERG DYNAMICS
T. Gallagher
A. Stolow / P. Bucksbaum / J. Jortner / T. Fauster / C. Jungen

MOLECULAR STRUCTURE AND DYNAMICS
P. Houston
K. de Lange / D. Normand / E. Rolfing

COLD COLLISIONS
B. Stawley
S. Leone / M. Machholm

CORRELATION
S. Berry
J. Hepburn / L. DiMauro / H.-P. Helm

MUSCLE: CONTRACTILE PROTEINS

COLBY-SAWYER COLLEGE
JULY 28 - AUGUST 2, 1996

Peter Vibert, *Chair*
Sarah Hitchcock-Degregori, *Vice Chair*

HIGH RESOLUTION STRUCTURES OF MYOSIN AND OTHER MOTOR PROTEINS
P. Vibert
R. Fletterick / A. Houdusse / I. Rayment

STRUCTURE AND FUNCTION OF THE MYOSIN HEAD
K. Trybus
R. Chisholm / M. Geeves / L. Sweeney

STRUCTURE AND FUNCTION OF THIN FILAMENT PROTEINS
T. Tao
J. Potter / B. Sykes / J. Trewhella

ACTIN-MYOSIN INTERACTIONS AND DYNAMICS
M. Irving
R. Milligan / G. Piazzesi / K. Wakabayashi

REGULATORY STATES
M. Geeves
W. Lehman / S. Lehrer / K. Poole

SINGLE MOTOR MECHANICS
D. Warshaw
S. Block / J. Molloy / T. Yanagida

PATHOLOGIES INVOLVING CONTRACTILE PROTEINS
S. Hitchcock-Degregori
N. Epstein / T. Hasson / J. Seidman

GENERAL DISCUSSION
T. Pollard

MUTAGENESIS

PLYMOUTH STATE COLLEGE
JUNE 23 - 28, 1996

Philip C. Hanawalt, *Chair*
Susan S. Wallace, *Vice Chair*

CONTROL OF REPLICATION FIDELITY: ROLE OF DNA POLYMERASES
S. Wilson / M. Goodman
C. Lawrence / E. Snow / R. Woodgate

ROLE OF MISMATCH REPAIR IN MODULATING MUTAGENESIS AND CHROMOSOMAL STABILITY
P. Modrich / M. Radman
T. Kunkel / M. Liskay / J. Jiricny

ENDOGENOUS SOURCES OF MUTAGENIC LESIONS AND THEIR REPAIR
T. Lindahl / S. Wallace
P. Cooper / R. Schaaper

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

ROLE OF EXCISION REPAIR IN MODULATING CELL SURVIVAL AND MUTAGESIS
R. Wood
J. Ford / K. Tanaka / E. Dogliotti

SEQUENCE-CONTEXT ROLE OF MUTAGENIC SPECIFICITY
L. Ripley / R. Fuchs
V. Maher / S. Tornaletti

RECOMBINATION MECHANISMS AND HYPERMUTATION IN THE IMMUNE SYSTEM
S. West / N. Maizels
J. Courcelle / S. Jinks-Robertson / U. Storb

TRANSGENIC SYSTEMS FOR STUDYING DNA LESION PROCESSING AND MUTAGENESIS
L. Samson
G. Douglas / M. Sekiguchi / G. Weeda

MUTAGENESIS IN NON-DIVIDING CELLS
B. Strauss / S. Rosenberg
S. Sommer / P. Foster

RELATIONSHIPS BETWEEN MUTATION AND CANCER: SPECIAL DISCUSSION SESSION
L. Loeb / B. Bridges

NANOSTRUCTURE FABRICATION, CHEMISTRY AND PHYSICS OF

NEW ENGLAND COLLEGE
JUNE 23 - 28, 1996

Margaret B. Stern, *Chair*
John Randall, *Vice Chair*

PROXIMAL PROBE FABRICATION, MANIPULATION, AND MEASUREMENT
D. Eigler / L. Dobisz
E. Snow / J. W. Lyding / K. Matsumoto / J. A. Kramar

SINGLE ELECTRON PHENOMENA
M. Reed
J. Martinis / J. S. Tsai

BEYOND ULSI TO QLSI
D. Tennant
S. J. Wind / E. Kratschmer / M. Rothschild

QUANTUM DEVICES
A. Forchel
D. Jovanovic / C. S. Lent

NOVEL DEVICES AND FABRICATION
J. Randall
M. J. Renn / M. Geis

CHEMICAL AND BIOLOGICAL NANOSTRUCTURES
H. Craighead
G. Whitesides / R. E. Smalley / S. J. Forrest / P. E. Burrows / S. Tyc-Dumont / G. Decher

NATURAL PRODUCTS

NEW ENGLAND COLLEGE
JUNE 30 - JULY 5, 1996

William R. Baker, *Chair*
Jon C. Clardy, *Vice Chair*

NATURAL PRODUCT SYNTHESIS
S. Davidsen / D. Guinn
D. Craig / I. Kuwajima / A. Robichaud / W. R. Roush / A. B. Smith, III

SYNTHETIC METHODS AND STRATEGIES
P. Wutts / R. Standaert / J. Partridge
S. Hanessian / E. N. Jacobsen / J. Leahy / L. Overman / V. Rawal

BIOSYNTHESIS OF NATURAL PRODUCTS
P. Senter
R. Coates / C. D. Poulter

NATURAL PRODUCT ISOLATION AND MODE OF ACTION
T. Molinski
S. Hecht / L. Mitscher / P. Woodward

NATURAL PRODUCTS FOR ANTI-INFECTIVE DRUG DISCOVERY
H. Kirst
C. Agouridas / Y. Or / N. Walshe

PROTEIN ENGINEERING
J. Shin
D. Hilvert / D. Holt / R. Volkmann

NEURAL DEVELOPMENT

SALVE REGINA UNIVERSITY
JUNE 23 - 28, 1996

Joshua R. Sanes, *Chair*
Susan Mcconnell, *Vice Chair*

NEURAL INDUCTION
R. Harland / B. Hogan / A. Hemmati-Brivanlou / J. Lee

PATTERN FORMATION
T. Jessell / M. Bronner-Fraser / A. Lumsden / W. Driever

LINEAGE AND FATE
D. Anderson / C. Doe / Y.-N. Jan / S. McConnell

TROPHIC CONTROL OF NEURAL FATE
S. Landis / H. Steller / E. Johnson

TRANSMEMBRANE SIGNALS FOR NEURITE OUTGROWTH
L. Reichardt / F. Walsh / P. Soriano

KEYNOTE ADDRESS
M. Raff

AXON GUIDANCE
C. Goodman / M. Hatten / F. Bonhoeffer

SYNAPSE FORMATION
M. Bate / J. Sanes / R. Scheller / M. Nonet

ACTIVITY-DEPENDENT REMODELING
C. Shatz / L. Katz / T. Bonhoeffer

NITROGEN FIXATION

COLBY-SAWYER COLLEGE
JUNE 30 - JULY 5, 1996

Douglas C. Rees / Dennis R. Dean, *Co-Chairs*

NITROGEN FIXATION - OVERVIEWS
D. Rees
B. Burgess / E. Stiefel / R. Dixon

NITROGENASE RELATED SYSTEMS
D. Dean
J. Howard / P. Lindahl / M. Johnson

GENE REGULATION
M. Merrick
A. Ninfa / S. Kustu / T. Hoover / T. Kranz / M. Gilles-Gonzalez

NITROGENASE MECHANISTIC ISSUES I
L. Seefeldt
J. Schlessman / H. Haaker / R. Thorneley

NITROGENASE MECHANISTIC ISSUES II
W. Newton
J. Peters / B. Smith / B. Hales / K. Schneider

CHEMISTRY OF NITROGEN FIXATION
D. Coucouvanis
C. Cummings / G. Leigh / R. Holm

METALLOCLUSTER ASSEMBLY
P. Ludden
R. Allen / G. Roberts / L. Zheng / W. Klipp / B. Friedrich

NOVEL SYSTEMS
P. Bishop
T. Thiel / S. Zinder / S. Nordlund

NITROGENASE ENZYMOLOGY
W. Orme-Johnson

NONDESTRUCTIVE EVALUATION

KIMBALL UNION ACADEMY
AUGUST 18 - 23, 1996

Christopher Fortunko, *Chair*
James Wagner, *Vice Chair*

MICROSTRUCTURE EVOLUTION AND SENSOR NEEDS
G. Posakony
C. Kahler / W. Sachse

MICROSTRUCTURE-PROPERTY RELATIONSHIPS
B. Tittmann
H. Ledbetter / B. Thompson / S. Rokhlin

PARAMETER MEASUREMENT ISSUES
D. Hurley
A. Noble / W. Meeker

MICROSTRUCTURE DETERMINATION
C. Sayers
M. Hirao / W. Johnson / K. Ferrara

IN-LINE MECHANICAL PROPERTY DETERMINATION
J. Bussiere
A. Bur / G. Dobmann

MECHANICAL PROPERTIES
R. Green
W. Arnold / D. Clarke

ECONOMIC IMPACT OF MECHANICAL PROPERTY MEASUREMENT TECHNIQUES
J. Williams

PROCESS SENSING IN THE SEMICONDUCTOR INDUSTRY
G. B. Alers
P. Khuri-Yakub / J. Winter / H. Maynard

PROCESS SENSING EXAMPLES
J. Wagner
D. Cannon / E. Waschkies

NUCLEAR CHEMISTRY

COLBY-SAWYER COLLEGE
JUNE 16 - 21, 1996

Wolfgang Trautmann, *Chair*
Kim Lister, *Vice Chair*

REACTION MECHANISMS AT RELATIVISTIC ENERGIES I
H.G. Ritter
D. Keane / J. Ritman

REACTION MECHANISMS AT RELATIVISTIC ENERGIES II
R. L. McGrath
F. Plasil / C.A. Ogilvie

TRANSPORT MODELS
J. Randrup
H. Feldmeier / M. Colonna / A. Ohnishi

MULTIFRAGMENTATION
V. A. Karnaukhov
I. N. Mishustin / V. E. Viola / W. F. J. Müller / M. B. Tsang

LIQUID-GAS PHASE TRANSITION
J. Bondorf
X. Campi / W. A. Friedman / D. H. E. Gross / J. B. Natowitz / W. Nörenberg / S. Pratt

NEW APPROACHES TO HOT NUCLEI
B. Tamain
E. Plagnol / U. Jahnke / M. D'Agostino

CORRELATION TECHNIQUES
L. G. Sobotka
D. R. Bowman / R. T. deSouza

FUSION AND FISSION
D.J. Hinde
P. Armbruster / J. P. Lestone / M. Dasgupta

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

APPLIED RADIOACTIVITY
K. Lister
E. Pernicka / J. S. Vogel

NUCLEAR PROTEINS, CHROMATIN STRUCTURE AND GENE REGULATION

TILTON SCHOOL
JULY 14 - 19, 1996

Sarah C. R. Elgin, *Chair*
Carl Wu, *Vice Chair*

REPLICATION AND HERITABLE CHROMATIN STATES
V. Zakian
J. Rine / P. Kaufman / R. Sternglanz / W. Bickmore / S. Tilghman

NUCLEAR ORGANIZATION AND PACKAGING
S. Tilghman
S. Gasser / M. Smith / V. Zakian / D. Koshland / L. Gerace

CHROMATIN ORGANIZATION/SILENCING
S. Gasser
M. Grunstein / L. Pillus / R. Allshire / L.Wallrath / J. Griffith / S. Henikoff

DOSAGE COMPENSATION/ HIGHER ORDER STRUCTURE
S. Elgin
M. Kuroda / B. Meyer / C. Woodcock / K. Van Holde / P. Von Hippel

DOMAINS/BOUNDARIES
G. Felsenfeld
J. Broach / P. Schedl / U. Laemmli / V. Corces / P. Geyer

DEVELOPMENT/EPIGENETIC REGULATION
M. Kuroda
R. Paro / V. Pirrotta / J. Mueller / B. Emerson / F. Grosveld / A. Wolffe

NUCLEOSOMES/TRANSCRIPTION
C. Wu
G. Felsenfeld / U. Hansen / F. Winston / J. Lis / P. Becker / D. Allis

NUCLEOSOMES/GENE ACTIVATION
A. Wolffe
G. Hager / W. Hörz / C. Wu / C. Peterson / R. Kingston / M. Yaniv

NUCLEOSOMES, NHC PROTEINS, TRANSCRIPTION INITIATION
W. Hörz
V. Moudrianakis / M. Gorovsky / R. Kornberg / J. Kadonaga / J. Workman / J. Thomas

NUCLEAR WASTE AND ENERGY (NEW)

PRUHONICE, CZECH REPUBLIC
SEPTEMBER 8 - 12, 1996

J. (Art) Janata / S. Hermanek, *Co-Chairs*

NUCLEAR WASTE FROM GLOBAL PERSPECTIVE
M. Feshbach / Y. Kaluzny

OPEN NUCLEAR FUEL CYCLE, ADVANTAGES, DISADVANTAGES, RISKS
P.-E. Ahlstrom / B. Cohen / C. J. Allan

CLOSED NUCLEAR FUEL CYCLE, ADVANTAGES, DISADVANTAGES, RISKS
A. E. Waltar / H. Tanaka

SEPARATION OF MIXED WASTES
V. N. Romanovskiy / V. G. Khlopin / S. Tachimori / G. R. Choppin

TRANSPORT MECHANISMS OF RADIOISOTOPES THROUGH THE ECOSPHERE
J. Zachara / H. Matsuzuru

RISK ANALYSIS AND BIOLOGICAL EFFECTS OF SHORT AND MEDIUM LIVED RADIOISOTOPES
R. Arutunyan / A. L. Brooks

BIOLOGICAL EFFECTS OF LONG LIVED RADIOISOTOPES
R. G. Thomas / M. I. Balonov

TRANSMUTATION OF DANGEROUS RADIONUCLIDES
C. Bowman / A. Gabbard / A. Rimskij-Korsakov

NUCLEAR ENERGY: TO BE OR NOT TO BE: ECOLOGICALLY ACCEPTABLE POWER GENERATION
B. Barre / A. Weinberg

NUCLEIC ACIDS

NEW HAMPTON SCHOOL
JUNE 9 - 14, 1996

Brenda Bass / Richard Gumport, *Co-Chairs*
Nancy Craig and Roy Parker, *Co-Vice Chairs*

GENOMES
D. Schwartz
T. Disotell / G. Olsen / D. Schwartz / L. Smith

RNA PROCESSING
M. Roth
M. Green / C. Guthrie / M. Konarska / M. Roth / J. Steitz

CHROMATIN AND GENE EXPRESSION
M. Groudine
B. Alberts / V. Corces / D. Gottschling / M. Groudine

NUCLEIC ACID: PROTEIN INTERACTIONS
H. Noller
J. Abelson / T. Alber / H. Noller / T. Steitz / J. Williamson

RNA CATALYSIS
J. Burke
J. Burke / D. Herschlag / F. Michel / N. Pace / S. Woodson

RECOMBINATION AND REPAIR
N. Craig
N. Craig / A. Lambowitz / M. Oettinger

RNA EDITING AND MODIFICATION
L. Simpson
N. Davidson / A. Herbert / J. McCloskey / L. Simpson / K. Stuart

REPLICATION AND CELL CYCLE
T. Kelly
K. Buchovich / T. Kelly / N. Kleckner / M. O Donnell

RNA TRAFFICKING AND UTILIZATION
J. Dahlberg
J. Dahlberg / B. Goodwin / R. Lührmann / P. Silver / N. Sonenberg

ORDER/DISORDER IN MATERIALS

COLBY-SAWYER COLLEGE
JULY 21 - 26, 1996

Werner Press, *Chair*
Sherwin J. Singer, *Vice Chair*

PHASE TRANSITIONS, PATTERN FORMATION AT SURFACES
E. Salje

FULLERENES(C60 AND RELATED)
P. Launois / J. Copley

DISORDER IN MATERIALS: AT HIGH TEMPERATURES AND PRESSURES
M. Klein / D. Neumann / H. Boysen

QUANTUM MOTIONS
A. Horsewill / M. Prager / J. Friedrich / P. Trommsdorff

HYDROGEN-BONDED SYSTEMS
M. Parrinello / M. A. White

DISORDERED SURFACES
J. Krim / A. Pines

METALS/INTERFACES
S. Moss

ORGANIC GEOCHEMISTRY

HOLDERNESS SCHOOL
AUGUST 11 - 16, 1996

Robert Alexander, *Chair*
Kenneth E. Peters, *Vice Chair*

MOLECULAR AND ISOTOPIC INDICATORS OF PALEOOCEANOGRAPHIC CONDITIONS
J. Hayes
R. R. Bidigare / H. Van Kaam-Peters

COMPARATIVE ORGANIC GEOCHEMISTRIES OF SOILS AND SEDIMENTS
J. Hedges
R. Keil / I. Kogel-Knabner

TOWARDS AN UNDERSTANDING OF ORGANIC GEOCHEMISTRY ON THE PREBIOTIC EARTH
S. A. Macko
G. Blake / J. Ferris

RESERVOIR PROCESSES
Kenneth E. Peters
W. England / A. Huc

BIOMARKER RESEARCH AND APPLICATIONS
M. McCaffrey
P. Albrecht / A. Murray / T. Peakman

GASES AND LIGHT HYDROCARBONS
F. Acholla
J. M. Moldowan / A. Prinzhoffer

ENVIRONMENTAL ORGANIC GEOCHEMISTRY
W. Michaelis
R. P. Eganhouse / H. Harms

NOVEL MOLECULAR ISOTOPIC ANALYSES: APPLICATIONS IN ORGANIC GEOCHEMISTRY
T. Eglinton
M. Engel

PALEOCLIMATE
K. Freeman
J. White / M. A. Arthur / B. Mycke

ORGANIC REACTIONS AND PROCESSES

NEW HAMPTON
JULY 14 - 19, 1996

Russell Linderman, *Chair*
John L. Dillon, *Vice Chair*

NEW SYNTHETIC METHODOLOGY VIA ORGANOMETALLICS
R. Grubbs / I. Fleming / W. Bailey / M. Lautens / C. Busacca

ADVANCES IN THE SYNTHESIS OF COMPLEX MOLECULES
P. Wender / S. Martin / J. White / J. Rebek, Jr.

CATALYTIC ENANTIOSELECTIVE SYNTHETIC METHODOLOGY
E. Carreira / C. Bolm / H. Kagan

DIASTEREO- AND ENANTIO-SELECTIVE REACTIONS OF CARBANIONS
P. Beak / D. Hoppe / T. Nakai / S. Rychnovsky / D. Collum

BIOORGANIC AND COMBINATORIAL CHEMISTRY
M. Pirrung / J. Ellman / L. Kiessling / A. Abdel-Magid

PHARMACEUTICAL PROCESS DEVELOPMENT
S. Nugent / F. Urban / T. Mulhern / A. Thompson / P. Maddocks

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

ORGANIC STRUCTURES AND PROPERTIES (NEW)

FUKUOKA, JAPAN
SEPTEMBER 23 - 28, 1996

Hiizu Iwamura, *Chair*

CHARGED REACTIVE INTERMEDIATES AND POLARONS

HIGHLY STRAINED MOLECULES

CARBENES AND NITRENES

POLYRADICALS AND SOLITONS; ELECTRONIC STRUCTURES OF ORGANIC MOLECULES VS. MOLECULAR SOLIDS

SUPRAMOLECULAR RECOGNITION OF FUNCTIONAL GROUPS AND CHROMOPHORES

CONSTRUCTION OF NANOSTRUCTURES

Y. Aoyama / A. de Meijere / M. Fujita / S. Iijima / N. Koga / R. J. McMahon / J. Michl / J.-P. Sauvage / S. W. Staley / P. J. Stang / J. Fraser Stoddart / H. Tomioka / C. Wentrup

ORGANOMETALLIC CHEMISTRY

SALVE REGINA UNIVERSITY
JUNE 30 - JULY 5, 1996

John Gladysz, *Chair*
Patricia Watson, *Vice Chair*

Carol Burns
Richard Jordan / Josef Michl

R. Bergman
G. Bazan / W. Roper / S. Sharma

K. Brown
H. Werner / T. Cundari / L. Liebeskind

G. Silverman
H. Suzuki / W. Buhro / S. Kristjansdottir

F. J. Timmers
K. Jørgensen / V. Gibson / L. Kollár

J. Corey
H. Sakurai / K. Caulton / R. Larsen

N. Hosmane
C. Schauer / G. Orpen / D. Milstein

D. Riley
D. Blackmond / P. Dixneuf / C. Mirkin

P. Wolczanski
R. Crabtree / C. Casey

PARTICLE-SOLID INTERACTIONS

PLYMOUTH STATE COLLEGE
JULY 21 - 26, 1996

Nghi Q. Lam, *Chair*
Raul Baragiola, *Vice Chair*

STOPPING POWER
J. Lindhard
P. Sigmund / A. Sörensen / C. Scheidenberger

ION TRACKS
A. Dunlop
K.-O. Groeneveld / H. Trinkaus / E. G. Gamaly

CLUSTER IONS
R. E. Johnson
D. Jacquet / C. T. Reimann

HIGHLY-CHARGED IONS
N. Stolterfoht
D. H. Schneider / R. Morgenstern

LOW-ENERGY ION SCATTERING
B. Cooper
W. Heiland / P. Bauer

GRAZING-INCIDENCE COLLISIONS
S. Datz
M. Mannami / H. Winter

SPUTTERING
P. Varga
H. Gnaser / E. H. Chason

COMPUTER SIMULATIONS
R. S. Averback
T. A. Tombrello / G. Betz

DEFECT-ASSISTED PROCESSES
G. Martin
L. E. Rehn / J. M. Poate

RECENT DEVELOPMENTS IN ION BEAM ANALYSIS
W. N. Lennard
M. A. Briere / R. Behrisch / A. R. Krauss

MATERIALS DESIGN WITH ION BEAMS
N. Herbots
I. Yamada / H. Bernas / W.-K. Chu

AFTER-BANQUET PRESENTATION
D. Gruen
T. Oka

PEPTIDE GROWTH FACTORS

KIMBALL UNION ACADEMY
AUGUST 11 - 16, 1996

Michael Klagsbrun, *Chair*
Joan Massagué, *Vice Chair*

CRUICKSHANK LECTURE: ENDOGENOUS REGULATORS OF BLOOD VESSEL GROWTH
J. Folkman

GROWTH FACTOR MECHANISMS
A. Roberts
S. Aaronson / A. Baird / R. Ross

GROWTH FACTORS IN DEVELOPMENT AND DIFFERENTIATION
P. Sternberg
R. Harland / G. Martin

GROWTH FACTOR RECEPTORS
D. Ornitz
L. Williams / C. Heldin / A. Yayon

TGF-ß SIGNALING
J. Massagué
R. Derynck / P. Donahoe

SIGNAL TRANSDUCTION
G. Carpenter
J. Schlessinger / L. Cantley / G. Plowman

VEGF / ANGIOGENESIS
P. D'Amore
P. Carmeliet / H. Dvorak

REGULATION OF GROWTH FACTOR ACTIVITY BY MATRIX AND ADHESION FACTORS
M. Bernfield
R. Assoian / P. Doherty / D. Rifkin

GROWTH FACTORS IN NORMAL PHYSIOLOGY AND PATHOLOGY
D. Stern
B. Ensoli / J. Wasmuth / S. Werner

PHASE TRANSITIONS IN NONMETALLIC SOLIDS

NEW ENGLAND COLLEGE
JUNE 9 - 14, 1996

Gustaaf Van Tendeloo, *Chair*
Ekhard Salje, *Vice Chair*

PRE-TRANSITION EFFECTS
S. Moss
V. Heine / A. Khachaturyan

THEORETICAL ASPECTS OF PHASE TRANSITIONS
V. Heine
K. Schwarz / R. Cohen

PHASE TRANSITIONS IN THE ELECTRON MICROSCOPE
J. Van Landuyt
J. Hutchison / L. Marks / D. Smith

PHASE TRANSITIONS IN INORGANIC COMPOUNDS
A. Khachaturyan
P. Wochner / T. Egami

PHASE TRANSITIONS IN MINERALOGY I
E. Salje
J. Banfield / E. Cross / U. Bismayer

PHASE TRANSITIONS IN MINERALOGY II
S. Ghose
P. Heaney / S. Rigden

FULLERENES AND NANOTUBES
G. Van Tendeloo
J. Copley / M. Ajayan / D. Ugarte

MOLECULAR STRUCTURES
G. Meijer / C. Koenig

PHASE TRANSITIONS IN MINERALOGY III
L. Groat
F. Schwabl / E. Salje

PHOTONUCLEAR REACTIONS

TILTON SCHOOL
JULY 28 - AUGUST 2, 1996

Alan M. Nathan, *Chair*
Franz Gross / Henk Blok, *Co-Vice Chairs*

THEORETICAL OVERVIEW
V. Pandharipande / B. Holstein / C. Roberts

STRUCTURE OF THE NUCLEON
E. Kinney / X. Ji

NUCLEON STRUCTURE AT LOW ENERGY
H. Schmeiden / R. Beck / N. D'Hose

THE DEUTERON
G. van der Steenhoven / J. W. van Orden / K. de Jaeger

CHIRAL SYMMETRY
E. Korkmaz / M. Distler / H. Stroher / D. Pocanic

FEW-BODY SYSTEMS
J. Ahrens / R. Lourie / K. Hicks

NUCLEI
E. Jans / C. McGeorge / G. Orlandini / T. O'Neill

OUTLOOK FOR THE FUTURE
L. Cardman / J.-M. Laget / D. Drechsel

PHOTOSYNTHESIS: BIOCHEMICAL ASPECTS

NEW HAMPTON SCHOOL
AUGUST 4 - 9, 1996

Charles F. Yocum, *Chair*
Melvin P. Okamura, *Vice Chair*

ANTENNA SYSTEMS
G. Schmidt
R. Cogdell / H. Paulsen

ELECTRON AND PROTON TRANSFER REACTIONS IN GENETICALLY-MODIFIED BACTERIAL REACTION CENTERS
M. Okamura / M. Gunner
C. Kirmaier / J. Williams / D. Hanson

PHOTOSYSTEM I: ELECTRON TRANSFER AND MUTAGENESIS
J. Biggins / D. Bryant
A. Webber / J. Golbeck / R. Malkin

PHOTOSYSTEM II: COMPONENTS / ASSEMBLY / PHOTOINHIBITION
B. Barry / T. Bricker
L.-E. Andreasson / R. Burnap / M. Miyao-Tokutomi

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

PHOTOSYSTEM III: ELECTRON TRANSFER & O_2 EVOLUTION
G. Brudvig / R. Debus
D.Britt / J. Messinger

GENE REGULATION
S. Golden / F.-A. Wollman
S. Merchant / A. Grossman / J. Hirschberg

CYTOCHROMES / CYTOCHROME COMPLEXES
W. Cramer
C.-A. Yu / J. Whitmarsh

PHOTOSYNTHETIC ATP SYNTHASES
R. McCarty /
Z. Gromet Elhanan
M. Richter / H. Strotmann / D. Ort

RETROSPECTIVE & PRESENTATIONS OF HIGHLIGHTS OF THE POSTER SESSION
T. Owens
A.T. Jagendorf

PHOTOSYNTHETIC CO_2 FIXATION AND METABOLISM IN GREEN PLANTS

TILTON SCHOOL
AUGUST 18 - 23, 1996

Steven C. Huber, *Chair*
Hans Bohnert, *Vice Chair*

WHOLE LEAF PHOTOSYNTHESIS AND PARTITIONING
B. Osmond
R. Furbank / U. Sonnewald

CARBOXYLATING ENZYMES
J. Andrews
R. Spreitzer / K. Izui / S. Gutteridge

CELLULAR METABOLISM AND TRANSPORT
I. Flugge
J. Servaites / D. Heineke

C/N INTERACTIONS: GENE EXPRESSION
C. Foyer
C. Meyer / H. Huppe / H.-M. Lam

C/N INTERACTIONS: REVERSIBLE PROTEIN PHOSPHORYLATION
C.Mackintosh
R. Chollet / W. Kaiser

CARBOHYDRATE REGULATION OF GENE EXPRESSION
M. Stitt
J. Sheen / J. Mullet / S. Smeekens

ELECTRON TRANSPORT IN RELATION TO METABOLISM
U. Heber
N. Baker / M. Badger

MANIPULATION OF ALLOCATION
W. J. Lucas
J. Preiss / W. Frommer / D. Stark

TRANSGENIC PLANTS AND METABOLISM
L. Willmitzer

PHYSICAL METALLURGY

HOLDERNESS SCHOOL
JULY 28 - AUGUST 2, 1996

Alton D. Romig / Darrell R. Frear / C. J. Van Tyne, *Co-Chairs*
Ronald Gibala / Samuel Allen, *Co-Vice Chairs*

KEY ISSUES IN MATERIALS PERFORMANCE AND MODELING OF MATERIALS
J. W. Morris, Jr. / R. Wagoner / G. Edwards / J. Dantzig

CONTINUUM, AND CONTINUUM-LIKE MODELS FOR MATERIALS PERFORMANCE
R. Wagoner / G. Daehm
R. Becker / N. Fleck / D. Bammann

INCORPORATION OF QUANTITATIVE MICROSTRUCTURAL INFORMATION IN THE MODELING OF MECHANICAL BEHAVIOR
J. Hack
F. Kocks / B. Adams / D. Pope

PREDICTION OF MATERIALS PROPERTIES
D. Hartwick / G. Gray
J. Jonas / A. Giamei

MODELING OF DEFECTS AND HETEROGENEITIES
F. Kocks
H. Mecking / C. Tome / J. Lee

MODELING OF MICROSTRUCTURAL EVOLUTION
J. Morral / E. Holm
J. Agren / D. Srolovitz

ATOMISTIC AND ELECTRONIC MODELS TO PREDICT MATERIALS PROPERTIES
B. Fultz
M. Baskes / J. M. Sanchez / G. Ceder

ROLES OF MATERIALS AND MODELING IN ADVANCED MANUFACTURING
M. Ceislak
T. Eager

PLANT MOLECULAR BIOLOGY

NEW HAMPTON SCHOOL
JULY 21 - 25, 1996

Athanasios Theologis, *Chair*
Pamela Green, *Vice Chair*

PLANT MOLECULAR BIOLOGY - GENE SILENCING
P. Green
W. Thompson / P. Green / V. Chandler / R. Flavell

LIGHT SIGNALING
P. Quail
T. Cashmore / G. Whitelam / E. Schäfer / J. Chory

PLANT HORMONE ACTION
A. Theologis
A. Theologis / J. Ecker / T. Bleecker / P. Hedden

PLANT DISEASE RESISTANCE
B. Baker

FRED AUSUBEL / BRIAN STASKAWICZ / JOHN RYALS / BARBARA BAKER

PLANT CELL BIOLOGY - INTRA- AND INTERCELLULAR
R. Quatrano
N. Raikhel / D. Schnell / S. Lazarowitz / R. Quatrano

BIOCHEMICAL GENETICS
G. Fink
G. Coruzzi / R. Last / N. Crawford / G. Fink

KEYNOTE ADDRESS:
S. Kustu

DEVELOPMENTAL GENETICS
D. Preuss
D. Weigel / L. Smith / C. Gasser / D. Preuss

GENOMICS
J. Ecker
J. Ecker / M. Bevan / R. Martienssen / R. Davis

PLANT SENESCENCE & PROGRAMMED CELL DEATH

PLYMOUTH STATE COLLEGE
JULY 14 - 19, 1996

Alan B. Bennett, *Chair*
Anthony Bleecker, *Vice Chair*

PROGRAMMED CELL DEATH
A. Bennett
A. Greenberg

PROGRAMMED CELL DEATH: PLANT PATHOGENESIS
D. Gilchrist
M. Heath / E. Lam

PROGRAMMED CELL DEATH: PLANT DEVELOPMENT
W. R. Woodson
D. Gallie / H. Fukuda/ E. Beers

ENDOGENOUS REGULATION OF SENESCENCE & RIPENING
L. Nooden
M. Reid / L. Hensel-Burke / S. Gan

ENVIRONMENTAL REGULATION OF SENESCENCE
M. Reid
K. Iba / D. DellaPenna

NUCLEIC ACID AND PROTEIN TURNOVER
R. Vierstra
R. Amasino / A. Mattoo / A. Lers

MEMBRANE AND CELL WALL TURNOVER
J. Thompson
R. Bostock / P. Matile / P. Dunsmuir

SIGNAL TRANSDUCTION REGULATING SENESCENCE
A. Bleecker
H. Klee / S. Philosoph-Hadas / J. Deikman

PLASMA PROCESSING SCIENCE (NEW)

NEW HAMPTON SCHOOL
AUGUST 11 - 16, 1996

Steven Girshick, *Chair*
Mark Kushner, *Vice Chair*

PLASMA-SURFACE INTERACTIONS
D. Graves
J. Heberlein / J. Kress

PLASMA MODELLING
N. Hitchon
J. Mostaghimi / L. Tsendin / M. Turner

FLUID DYNAMICS IN PLASMA PROCESSING
P. Fauchais
D. Goodwin / S. Vosen

PARTICLES IN PLASMAS
A. Garscadden
A. Howling / J. Perrin / A. Vardelle

PLASMA CVD OF SUPERHARD MATERIALS
E. Pfender
M. Cappelli / C. Lieber / T. Yoshida

NON-EQUILIBRIUM PLASMAS IN AIR
M. Kushner
J. Lowke

IR SPECTROSCOPY OF PLASMAS
G. Kroesen
K. Tachibana / W. Urban / C. Woods

POINT & LINE DEFECTS IN SEMICONDUCTORS

PROCTOR ACADEMY
AUGUST 18 - 23, 1996

L. C. Feldman, *Chair*
C. Van De Walle, *Vice Chair*

DEFECTS IN WIDE BANDGAP MATERIALS
T. A. Kennedy / S. Rand / J. Langer / A. Suchocki / P. Thibado / H. Salemink / K. Cho

SILICON: DOPANTS AND IMPURITIES
R. Newman
S. Pantelides / T. Gregorkiewicz / G. Weyer

DEFECTS IN PROCESSING
P. Grifin
J. M. Poate / O. W. Holland

SILICON/SILICON DIOXIDE INTERFACE
R. McFeely / M. Hybertsen

GRAIN BOUNDARY DEFECTS
N. H. Nickel / G. D. Watkins

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

GALLIUM NITRIDE
J. Bernholc
T. Suski / J. Neugebauer / B. K. Meyer / M. S. Brandt / W. K. Goetz

EXTENDED DEFECTS / ELECTRONIC PROPERTIES
E. Fitzgerald
L. P. Tilly / J. C. Spence

POLYMER PHYSICS
SALVA REGINA
JULY 14 - 19, 1996

Karl Freed, *Chair*
Edwin L. Thomas, *Vice Chair*

STRUCTURES IN BLOCK COPOLYMER SYSTEMS
R. Stadler / N. Thomas

VISUALIZATION OF PHASE SEPARATION DURING FLOW
C. Han / H. Tanaka

NEW METHODS IN POLYMER PHYSICS
D. Yoon / S. Greer

PHASE BEHAVIOR IN POLYOLEFINS
B. Graessley / J. Dudowicz

THIN POLYMER FILMS
M. Moeller / S. Kumar / A. Karim

INTERFACIAL PHENOMENA
T. Russell / T. Witten

POLYMER GLASSES
K. Binder / G. McKenna / M. Ediger

PAST, PRESENT, AND FUTURE OF POLYMER PHYSICS
E. Fischer / S. Edwards

POLYMERS
NEW ENGLAND COLLEGE
JUNE 23 - 28, 1996

Russell Gaudiana, *Chair*

BIOMEDICAL APPLICATIONS
A. J. Pennings / W. M. Saltzman

POLYMERIZATION
J. Crivello / B. M. Novak / C. Hawker

SUPRAMOLECULAR ARCHITECTURES
J. S. Moore / N. Kimizuka / M. van Genderen

PHOTOIMAGING MATERIALS
J. Hanson / O. Nalamasu / H. Ito

NOVEL IMAGING
D. Neckers / R. Ingwall

SURFACE MODIFICATION
D. E. Bergbreiter / J. E. Mark / K. Amundson / D. Waldman

MICROSTRUCTURES
A. Eisenburg / C. R. Martin

ELECTRO-OPTICS POLYMERS
T. M Swager / J. Tour / S. K. Triathy / L. Yu

HELICAL POLYMERS IN NATURE AND TECHNOLOGY
O. Vogl

PROTEOGLYCANS
PROCTOR ACADEMY
JULY 7 - 12, 1996

Bryan Toole, *Chair*
Jeffrey Esko, *Vice Chair*

NEW DEVELOPMENTS
B. Toole

GENE STRUCTURE AND REGULATION
R. Iozzo
M. Jalkanen / D. Zimmerman / T. Ratcliffe

GENE KNOCKOUTS
H. Baribault

SYNTHESIS
J. Esko
U. Lindahl / O. Habuchi / X. Bai

CELL BIOLOGY
A. Rapraeger
B. Vertel / R. Sanderson / K. Williams

SIGNALING
A. Woods
J. Couchman / A. Yayon

INTERACTIONS
K. Vogel
R. Margolis / M. Hook / D. Heinegard

DEVELOPMENTAL BIOLOGY
P. Goetinck
C. Underhill / S. Selleck

CANCER
W. Knudson
E. Turley / I. Stamenkovic / J. Mccarthy

PROTEOLYTIC ENZYMES AND THEIR INHIBITORS
COLBY-SAWER COLLEGE
JULY 21 - 26, 1996

Guy Salvesen, *Chair*
Charles Craik, *Vice Chair*

PROTEINASE AND INHIBITOR MECHANISMS AND NEW TECHNOLOGY
B. Dunn / E. Madison
M. Abrahamson / A. Barrett / P. Frey / S. Kent / M. Laskowski, Jr. / J. Powers / S. Stone / A. Warshel

PROTEINASES AND INHIBITORS IN DEVELOPMENT AND PATHOLOGY
J. Travis / Z. Werb
K. Anderson / P. Beachy / R. Black / P. Rosenthal / C. Sommerhoff / R. Stein

PROTEINASE STRUCTURE AND ASSEMBLY
W. Bode
H. Brandstetter / F-X. Gomis-Ruth / L. Joshua-Tor / J. Loewe / W. Stallings

PROTEINASES IN PROGRAMMED CELL DEATH
N. Thornberry
D. Nicholson / A. Rosen / J. Tschopp / W. Wong

RADIATION CHEMISTRY
SALVE REGINA UNIVERSITY
JULY 7 - 12, 1996

John M. Warman, *Chair*
Michael D. Sevilla, *Vice Chair*

RADIATION EFFECTS ON DNA
J. F. Ward
M. Terrissol / D. Becker / B. D. Michael

ED HART SYMPOSIUM
J. R. Miller
Young Scientists' Presentations

PULSE RADIOLYSIS STUDIES OF AQUEOUS SYSTEMS
M. Z. Hoffman
S. P. Mezyk / Q. G. Mulazzani / K. D. Asmus

PRIMARY SPECIES IN IRRADIATED GASES
M. C. Sauer, Jr.
R. Cooper

THE CHEMISTRY AND PHYSICS OF RADIATION TRACKS
N. J. B. Green
L. Wojnarovits / W. M. Bartczak / R. A. Holroyd / B. Brocklehurst

PRIMARY SPECIES IN IRRADIATED LIQUIDS
Y. A. Berlin
W. F. Schmidt

RADIATION EFFECTS IN MOLECULAR MATERIALS
S. Tagawa
M. P. de Haas / W. D. Werst / O. Brede

PULSE RADIOLYSIS STUDIES OF ELECTRON TRANSFER IN PROTEINS
I. Pecht
S. S. Isied / G. L. McLendon

THE RADIATION CHEMISTRY OF FOOD
K. M. Morehouse
I. A. Taub

NEW ACCELERATORS FOR CHEMISTRY
M. D. Sevilla
J. F. Wishart

REPRODUCTIVE TRACT BIOLOGY
PLYMOUTH STATE COLLEGE
JULY 7 - 12, 1996

Leland W. K. Chung, *Chair*
Kenneth Korach, *Vice Chair*

SIGNALING GENES FOR THE CELL SURFACE
J. Darnell

INTRACELLULAR SIGNAL TRANSDUCTION
M. Weber
J. Maler / T. Wang / J. Mulholland

BIOLOGY OF IMPLANTATION AND PARTURITION
F. Bazer
S. Fisher / M. Roberts / R. Garfield / L. Giudice

PHYSIOLOGY AND DEVELOPMENT OF MALE REPRODUCTIVE TRACT
B. Zirkin
J. Herr / R. Hess / E. Eddy

TRANSGENIC AND KNOCKOUT APPROACHES TO REPRODUCTIVE HORMONE ACTION
P. Donahoe
M. Matzuk / S. Camper / F. DeMayo / J. Couse

ENVIRONMENTAL HORMONE AGONISTS AND ANTIGONISTS
J. Mclachlan
G. Stancel / N. Skakkebaek / E. Jensen / W. Kelce

EXTRACELLULAR MATRICES AND INTEGRINS
S. Glasser
D. Carson / Z. Werb / B. Lessey / H. Kleinman

REPRODUCTIVE IMMUNOLOGY
R. Lyttle
E. Adashi / J. Hunt / C. Loke

DEVELOPMENTAL BIOLOGY
D. MacLaughlin
I. Dawid / R. Behringer / D. Barlow / D. Page

DNA MODIFICATION ASSOCIATED WITH REPRODUCTION, DEVELOPMENT, CANCER AND DEATH
D. Coffey

RESEARCH AT HIGH PRESSURE
KIMBALL UNION ACADEMY
JUNE 23 - 28, 1996

Hans D. Hochheimer, *Chair*
James S. Schilling, *Vice Chair*

SHOCK WAVE PHYSICS
W. Nellis
K. Kondo / P. Fiske

UNIAXIAL STRESS AND SEMICONDUCTOR PHYSICS
J. L. Robert
M. Cardona / A. Adams / G. Samara

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

ULTRASONIC INTERFEROMETRY AND MOESSBAUER SPECTROSCOPY IN DAC'S
W. A. Bassett
H. Spetzler / R.D. Taylor / S. Theobald

HIGH PRESSURE AND SYNCHROTRON RADIATION, CRYSTAL STRUCTURE
W. B. Holzapfel
D. Haeusermann / M. McMahon / R. Nelmes / P. Soederlind

HYDROGEN AT MEGABAR PRESSURES
K. Syassen
A. Ruoff / I. Silvera / R. Hemley / D. Mao

AMORPHIZATION, MATERIAL SYNTHESIS UNDER PRESSURE
W. Pechhold
P. Mcmillan / G. Wolf / D. Klug

PHASE TRANSITIONS AT HIGH PRESSURE
S. Tozer
W. B. Daniels / M. Bernasconi / M. Aronson

CONDENSED MATTER PROBLEMS
R. Marzke
N. Ashcroft / S. Stishov

SALT- AND WATER-STRESS IN PLANTS, CELLULAR BASIS OF ADAPTATION TO

TILTON SCHOOL
AUGUST 11 - 16, 1996

Andrew Hansen, *Chair*
Eduardo Blumwald, *Vice Chair*

THE INTRACELLULAR MILIEU: ATPASES AND CO-TRANSPORT SYSTEMS
C. Slayman
U. Pick / W. Epstein / T. Rausch

CHANNELS
E. Blumwald
D. Schachtman / R. Kaldenhoff

OSMOPROTECTANTS
G. Stewart
D. Pal Verma / D. Rhodes / B. Rathinasabapathi

STRESS-INDUCED BIOCHEMICAL CHANGE
E. Weretilnyk
W. Plaxton / R. Chollet

REGULATION AND SIGNALLING: STRESS PERCEPTION , MECHANISMS
A. Smith
M. Thomas Record / M. Gustin / S. Assmann

CONTROL OF GROWTH
J. Passioura
J. Boyer / S. McQueen-Mason

GENE REGULATION
R. Bressan
K. Shinozaki / M. Oliver / A. Rodriguez-Navarro

INTEGRATION: ENGINEERING SALT AND DROUGHT TOLERANCE
H. Bohnert
T. Takabe

GENETIC ENGINEERING OF IONIC RELATIONS
Open Discussion

WHOLE-PLANT SALT & DROUGHT TOLERANCE
L. Van Volkenburgh
A. Yeo / J. Passioura

INFORMAL INTRODUCTORY SESSIONS
S. Tyerman / R. Bressan

SECOND MESSENGERS AND PROTEIN PHOSPHORYLATION

KIMBALL UNION ACADEMY
JUNE 9 - 14, 1996

Thomas W. Sturgill, *Chair*
Patrick J. Casey, *Vice Chair*

SIGNAL INITIATION BY TYROSINE PROTEIN KINASES AND G-PROTEIN LINKED RECEPTORS
M. White
C. Carter-Su

G-PROTEIN CONFERENCE
P. Casey
A. Larner

LIPID SECOND MESSENGERS
J. Exton
Y. Hannun

REGULATION OF PROTEIN KINASES
B. Kemp
S. Taylor / M. Cobb / A. Nairn

KINASE CASCADES
G. Johnson
G. Thomas / P. Cohen / J. Lawrence

CAMP METABOLISM AND THE CELL CYCLE
J. Maller
J. Beavo / C. Rubin / M. Mcleod / N. Lamb

PROTEIN PHOSPHATASES
A. Depaoli-Roach
J. Maller / M. Mumby / N. Tonks

METABOLIC ACTIONS OF INSULIN
L. Witters
P. Roach / M. Birnbaum / M. Alexander-Bridges

REGULATION BY PROTEIN PHOSPHORYLATION AND DEPHOSPHORYLATION
T. Sturgill
D. Brautigan / P. Blackshear

PLENARY SESSION
J. Avruch

SOLID STATE CHEMISTRY

COLBY-SAWYER COLLEGE
JULY 14 - 18, 1996

M. Stanley Whittingham, *Chair*
Jack W. Johnson / Peter Battle, *Co-Vice Chairs*

MOLECULAR LEVEL COMPOSITES
T. Mallouk
T. Bein / G. Ozin

MATERIALS FOR ELECTROCHEMICAL USES
P. Davies
Y. Piffard / L. Nazar / M. Lerner

NEW TECHNIQUES FOR MATERIALS
D. Murphy
C. Grey / J. Parise

NEW SYNTHESIS APPROACHES
M. Kanatzidis
G. Ferguson / A. Stein / C. Page / M. Thompson

NEW SYNTHESIS APPROACHES
A. Stacy
R. Kaner / A. Manthiram / A. Guloy

ELECTRONIC, OPTICAL AND MAGNETIC PROPERTIES
P. Battle
D. Nocera / J. Greedan / G. Stucky

MATERIALS EDUCATION
A. Stacy

OXIDE CAGES AND SIEVES
A. Jacobson
M. Weller / J. Beck / J. Ying / N. Corcoran

LAYERED COMPOSITES
M. Greenblatt
E. Gianellis / D. Johnson

STATISTICS IN CHEMISTRY AND CHEMICAL ENGINEERING

QUEENS COLLEGE, OXFORD UNIVERSITY
AUGUST 25 - 30, 1996

Age K. Smilde, *Chair*
Lyle Ungar, *Vice Chair*

STATISTICAL METHODS FOR EXTREME VALUES
D. Keller
J. Tawn / P. Geladi

INTERNATIONAL COMPETITION OF NONLINEAR PREDICTION METHODS
D. Deveaux
A. Hoskuldsson / B. Wythoff / J. Morris/ E. Martin / S. de Jong

CLASSIFICATION OF PROTEINS. DO GENETIC ALGORITHMS WORK FOR (PHYLO)GENETIC PROBLEMS?
R. Tobias
P. Lewi / T. Steerneman

ISSUES IN NONLINEAR PARAMETER ESTIMATION AND MULTIVARIATE MODEL

DISCRIMINATION: APPLICATIONS IN POLYMER REACTION ENGINEERING
V. Fedorov
T. Duever / A. Penlidis / A. Atkinson

DISCRIMINANT AND CANONICAL VARIATE ANALYSES WITH HIGH-DIMENSIONAL DATA
I. Olkin
W. J. Krzanowski / C. ter Braak

SELF-MODELING CURVE RESOLUTION: THEORY, APPLICATIONS AND NEW DEVELOPMENTS
A. Phatak
W. Windig / R. Tauler

DEALING WITH MISSING DATA IN STATISTICAL ANALYSIS
D. Bacon
D. Rubin / A. El-Shaarawi

VISUALIZATION OF MASSIVE DATA SETS
K. Esbensen
D. Carr/ G. Hahn

UNSOLVED PROBLEMS AND PARTIAL SOLUTIONS IN MULTIVARIATE STATISTICAL PROCESS CONTROL
C. Georgakis
S. Butler / B. Wise / B. Skagerberg

SOLID STATE IONICS

COLBY-SAWYER COLLEGE
JUNE 16 - 21, 1996

Steve Martin, *Chair*
Steven Visco, *Vice Chair*

Program information for this conference is not available at this time. For further information contact the chair of the conference at:

Steve Martin
Iowa State University
Materials Science & Engineering
110 Engineering Annex
Ames, IA 50010

Fax:
515-294-9273

e-mail:
swmartin@iastate.edu

SESSION TITLES ARE INDICATED IN BOLDFACE, *Discussion Leaders in Italics,* and Speakers in Regular type.

STEREOCHEMISTRY

SALVE REGINA UNIVERSITY
JUNE 9 - 14 1996

Sarah E. Kelly, *Chair*
Franklin A. Davis, *Vice Chair*

S. Denmark / A. Hoveyda / S. Schreiber / G. Verdine / S. Danishefsky / S. Buchwald / C. Heathcock / W. Clark / E. Carreira / G. Fu / F. Fang / L. Kiessling / T. Sammakia / K. N. Houk / A. Pfaltz / E. Grabowski / S. Burke / W. Pirkle

TETRAPYRROLES

NEW ENGLAND COLLEGE
JULY 14 - 19, 1996

Joseph Bloomer, *Chair*
Peter Jordan / Clark Lagarias, *Co-Vice Chairs*

TETRAPYRROLE CHEMISTRY
D. Lightner
A. McDonagh / E. Vogel

REGULATION OF TETRAPYRROLE SYNTHESIS
J. Kushner
D. Söll / D. Brenner / E. Leibold

ENZYMOLOGY OF TETRAPYRROLE BIOSYNTHESIS
E. Jaffe
T. Lash / H. Dailey

PHOTOSYNTHESIS
S. Beale
C. Bauer / N. Isaacs / H. Staab

CHLOROPHYLL AND HEME DEGRADATION
J. Sinclair
B. Kräutler / P. Ortiz de Montellano

TETRAPYRROLE - PROTEIN INTERACTION
J. Collman
C. Drennan / T. Loehr / M. Clague

CLINICAL ASPECTS OF PORPHYRIAS
H. Bonkovsky / M. Poh-Fitzpatrick

BIOLOGICAL APPLICATIONS OF TETRAPYRROLE METABOLISM
G. Elder
M. Kreimer-Birnbaum / S. Lesage

DISORDERS OF TETRAPYRROLE METABOLISM
Y. Nordmann
P. Meisner / M. Mathews-Roth / J. R. Chowdhury

KEYNOTE ADDRESS
K. Smith

THEORETICAL BIOLOGY AND BIOMATHEMATICS

TILTON SCHOOL
JUNE 9 - 14, 1996

Lisa Fauci / Bard Ermentrout, *Co-Chairs*

ECOLOGY
S. Gueron
J. Cushing / J. Powell / I. Barradas

CALCIUM AND SYNAPTIC TRANSMISSION
A. Sherman
S. Sivaramakrishnan / E. Stanley

ANALYSIS OF THE ENCODING OF INFORMATION BY NERVE CELLS AND NETWORKS
J. Miller
T. Gawne / F. Theunissen

MOLECULAR MOTORS
George Oster
S. M. Block / C. R. Doering / A. Mogilner

MICROBIAL MOTILITY
R. Dillon
R. Ford / J. O. Kessler

STATISTICAL MODELS, NEURAL CODING AND INFORMATION
L. Abbott
Y. Dan / E. Salinas / E. Brown

PATTERN FORMATION AND IMMUNOLOGY
S. Lubkin
M. Dembo / D. Kirschner

BIOLOGICAL FLUID DYNAMICS I
A. Fogelson
C. Peskin / N. Hill

BIOLOGICAL FLUID DYNAMICS II
S. Vogel
M. Koehl

TRIBOLOGY

HOLDERNESS SCHOOL
JUNE 30 - JULY 5, 1996

Jorn Larsen-Basse, *Chair*
Said Jahanmir, *Vice Chair*

TRIBOEMISSIONS
T. Fischer
J. T. Dickinson / Y. Enomoto

TRIBOCHEMISTRY
M. Gardos
J. M. Martin / T. Fischer / R. Komanduri

NANO-SCALE TRIBOLOGY
B. Bhushan
F. Ogletree / R. Kaneko

CONTACT DAMAGE AND WEAR
D. A. Rigney
B. Lawn / T. C. Ovaert / S. Danyluk

THIN FILM LUBRICATION
K. J. Wahl / S. Granick / V. V. Tsukruk

BIOTRIBOLOGY
D. Rekow
R. DeLong / K. Komvopoulos / M. J. Furey

THIRD BODIES IN TRIBOLOGY
H. C. Cheng
F. Sadeghi / H. Heshmat

MODELING
K. C. Ludema
M. K. Robbins / R. Salant / A. Akay

VASCULAR CELL BIOLOGY

PROCTOR ACADEMY
JUNE 23 - 28, 1996

Elizabeth G. Nabel / Israel F. Charo, *Co-Chairs*

THROMBOSIS AND THROMBOLYSIS
S. Coughlin
J. Degen / H. Weiler

VASCULAR DEVELOPMENT
C. Buck
T. Sato / D. Stainier / M. Majesky

INTEGRINS
M. Ginsberg
D. Shepard / S. Dedhar / M. Schwartz / L. Parise

GENE TARGETING AND GENE TRANSFER
E. Nabel
H. Bujard / M. Parmacek / J. Leiden / R. Pitas

CYTOKINES AND VASCULAR DISEASE
P. Libby
T. Schall / I. Charo / B. Rollins

GROWTH REGULATION AND APOPTOSIS
S. Schwartz
V. Dixit / M. Bennett / L. Langille / M. Reidy

KEYNOTE ADDRESS
I. Charo / E. Nabel
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ENDOTHELIAL CELLS, LEUKOCYTES AND CELL ADHESION
M. Gimbrone
T. Collins / P. Ward

VIBRATIONAL SPECTROSCOPY

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Anne Myers, *Chair*
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ALL-TIME-DOMAIN VIBRATIONAL SPECTROSCOPIES
Keith Nelson
P. Champion / V. Sundström / K. Tominaga / S. Ruhman

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D. Miller
D. Ben-Amotz / E. Castner / T. Keyes / J. Simon / B. Lotshaw

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W. Woodruff
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AUGUST 4 - 9, 1996

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H. Eugene Stanley, *Vice Chair*

WATER IN PROTEINS
A. Parseghian
P. Nicholls / P. Kahn / R. Wolfenden

AMORPHOUS ICE TO HOT WATER
J. Teixeira
G. Johari / O. Mishima / A. Geiger / M. Neumann / P. Debenedetti

SCATTERING: X-RAY, NEUTRON
M.-C. Bellissent-Funel
T. Yamaguchi / A. Soper

ULTRAFAST DYAMICS / HOLE BURNING
A. Laubereau
E. Castner / R. J. Dwayne Miller / G. J. Small / H. Graener / W. T. Lotshaw

LOW-FREQUENCY RAMAN SPECTROSCOPY
Y. Tominaga
Y. C. Chu / Y. Kameda / O. Faurskov-Nielsen

HYDRATION OF BIOMOLECULES
B. Schoenborn
S. Leikin / H. Berman / A. Gronenborn / E. Mayer

ICE AND CAGES
P. Kusalik
I. Svischev / S.-H. Chen

STRUCTURE AND DYNAMICS OF H-BONDED SYSTEMS
C. A. Angell
A. Luzar / T. Head-Gordon / R. Saykally / N. Agmon

CRITICAL PHENOMENA
G. E. Walrafen
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Agricultural Science
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Angiotensin
Antimicrobial Peptides (NEW)
Applied & Environmental Microbiology
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Atmospheric Chemistry
Atomic Physics
Barrier Function of Mammalian Skin
Biodegradable Polymers
Bioenergetics
Biological Structure & Gene Expression
Biomaterials:Biocompatibility & Tissue Engin.
Bioorganic Chemistry
Bones & Teeth
CAE in Polymer Processing (NEW)
Calcium Signalling
Cancer
Carbohydrates
Catalysis
Catecholamines
Cell Contact & Adhesion
Cell Death
Cell Proliferation, Molec. & Genetics Basis of
Ceramics, Solid State Studies
Chemical Oceanography
Chemical Reactions at Surfaces
Chemotherapy of AIDS
Chemotherapy of Exper. & Clinical Cancer
Chronobiology
Coastal Ocean Circulation
Coatings & Films
Collagen
Complex Fluids
Condensed Matter Physics
Corrosion, Aqueous
Developmental Biology
Drug Metabolism
Dynamics at Surfaces
Elastin & Elastic Fibers
Elastomers
Electrochemistry
Electronic Materials
Enzymes, Coenzymes & Metabolic Pathways
Epigenetics
Epithelial Differentiation & Keratinization
Excitation at Semiconductor Surfaces
Fertilization & Activation of Development
Fiber Science
Fibronectin, Integrins & Related Molecules
Forested Catchments, Hydro/Geo/Bio Processes in
Free Radical Reactions
Gaseous Ions, Structure, Energetics & Reaction
Genetic Toxicology
Glycobiology
Gravitational Effects in Physico-Chemical Systems
Heterocyclic Compounds
High-Perform. Computing & Information Infrastru
Hormonal Carcinogenesis
Hormone Action
Human Molecular Genetics
Hydrocarbon Resources, Chemistry of
Hydrogen-Metal Systems
Innovations in College Chemistry Teaching
Inorganic Chemistry
Inorganic Reaction Mechanisms (NEW)
Ion-Containing Polymers
Kallikreins and Kinins
Laser Diagnostics in Combustion
Lipid Metabolism
Liquid Crystals
Liquids, Chemistry & Physics
Macromolecular Organization & Cell Function
Magnetic Nanostructures
Magnetic Resonance
Magnetic Resonance in Biology & Medicine
Mammalian DNA Repair Mechanisms
Mammary Gland Biology
Matrix Isolated Species, Physics & Chem. of
Matrix Metalloproteinases
Mechanisms of Membrane Transport
Medicinal Chemistry
Membranes: Materials & Processes
Metals in Biology
Microbial Population Biology
Modern Developments in Thermodynamics
Molecular Electronic Spectroscopy
Molecular Energy Transfer
Molecular Mechanisms of Microbial Adhesion
Molecular Membrane Biology
Molecular Pharmacology
Muscle: Excitation/Contraction Coupling
Mycotoxins & Phycotoxins
Natural Products
Neural Plasticity
Neuroendocrinimmunology
Neurotrophins
Nitric Oxide in Biochemistry & Biology
Nonlinear Optics and Lasers
Nuclear Chemistry
Nuclear Physics
Nucleic Acids
Organic Photochemistry
Organic Reactions & Processes
Organometallic Chemistry
Origins of Solar Systems
Oscillations & Dynamic Instabilities in Chem. Sys
Parasitism
Periodontal Diseases
Phagocytes
Photoacoustic & Photothermal Phenomena
Physical Organic Chemistry
Plant Cell Genetics & Development
Plasmid & Chromosome Dynamics
Polyamines
Polymer Colloids
Polymers (East)
Polymers (West)
Proteins
Protons & Membrane Reactions
Purines, Pyrimidines & Related Substances
Quantitative Genetics & Biotechnology
Quantitative Structure Activity Relationships
Quinone & Redoxactive Amino Acid Cofactors
Reactive Polymers, Ion Exchangers & Adsorbtion
Red Cells
Rock Deformation
Salivary Glands and Saliva (NEW)
Sea Ice Ecology (NEW)
Second Messengers & Protein Phosphorylation
Solid State Chemistry
Staphylococcal Diseases
Statistics in Chemistry & Chemical Engineering
Superconductivity
Supramolecules & Assemblies, Chemistry of
Temperature Stresses in Plants
Thin Films & Crystal Growth Mechanisms
Three Dimensional Electron Microscopy
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PRODUCTS & MATERIALS

Transfer Membrane Stain

FAST*blot* is a proprietary reagent for reversible staining of protein on nitrocellulose and polyvinylidine fluoride transfer membranes. FAST*blot* only stains proteins and leaves the background brilliant white, producing high band visibility. The staining procedure takes 10 min and has a higher sensitivity than silver stain. The transfer membrane can be destained in 10 min. **Geno Technology. Circle 131.**

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Baculovirus DNA

Bac-N-Blue DNA yields greater than 80% recombinant virus, reducing the time necessary to obtain a pure recombinant to as little as 14 days. Bac-N-Blue DNA can be used with any polyhedrin promoter-based baculovirus transfer vector. **Invitrogen. Circle 132.**

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Apoptosis Detection Kits

TACS Blue Label is a sensitive in situ system for detecting apoptotic cells in difficult-to-label tissues and cell lines. The distinguishing feature of the system is the dark blue positive signal identifying DNA fragmentation associated with apoptosis. The blue signal makes identification of positive cells unambiguous and produces great contrast with low background in both counterstained and noncounterstained tissues. The kit comes complete with all reagents for pretreatment, labeling, detection, and counterstaining, and includes control slides. **Trevigen. Circle 133.**

■

Plasmid DNA Purification System

The BioPlaz MaxiPrep Plasmid Purification System is for the rapid extraction and purification of plasmid DNA from 100- to 500-ml *Escherichia coli* bacterial cultures. The kit results in high yields of supercoiled plasmid DNA without the use of columns or organic extractions. The system makes use of a unique DNA binding resin that binds only plasmid DNA. Cell debris, RNA proteins, and chromosomal DNA are removed by centrifugation. The plasmid DNA is purified using the DNA binding resin and eluted with either water or buffer. **Biotecx Laboratories. Circle 134.**

■

Microtome for Morphological Studies

The Leica VT 1000 is a vibrating blade microtome for preparation of nonfrozen brain

sections for study by isotopic, enzymatic, and fluorescence systems. The blade cuts in two perpendicular directions and the tissue is permanently immersed in a physiological buffer, cooled with ice, for optimum preservation of tissue antigenicity. An important advantage is that the blade holder and the buffer tray can be removed to prevent unwanted fixation of unfixed material. **Leica. Circle 135.**

■

Efficient Mammalian Transfection

Transfer of DNA and other nuclear proteins into cells can be achieved with high effi-

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ciency and maximum expression through the use of Genetransfer. This gene transfection vehicle comes in the form of an inner coating of its packaged vial, thus enabling the researcher to readily form liposomal vesicle complexes through the simple addition of the DNA solution of choice. **Wako Bioproducts. Circle 136.**

■

Elution Medium

ActiSep is a nondenaturing, neutral elution medium for recovering antibodies from immunoadsorbents and protein A resins without the loss of biological activity. The ActiSep formula gently releases antibodies by individually breaking up their multiple interactions with antigens and protein A. ActiSep preserves the biological activity of antibodies and antigens while increasing the longevity of the immunoadsorbent. **Sterogene. Circle 137.**

■

Bottletop Filters

Stericap and Steritop vacuum-driven bottletop filters let you filter tissue culture media, microbiological media, and other biological solutions into your own receiver bottles or flasks. There is no extra plastic to buy or store. The Stericap unit can process up to 3000 ml directly into any type of container, using either vacuum or pressure. The Steritop unit is a bottletop funnel in 500- and 150-ml sizes to fit 45- or 33-mm necks. **Millipore. Circle 138.**

■

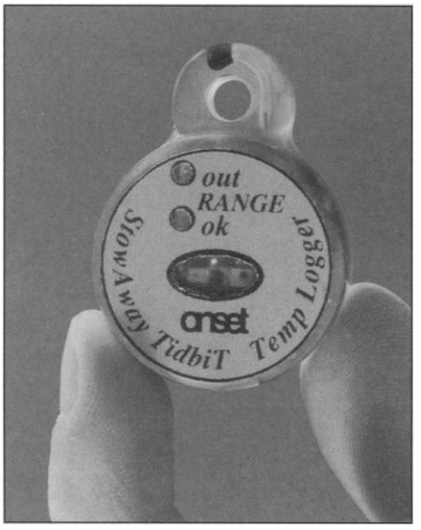
Messenger RNA Isolation Kit

Message Maker kits allow direct and rapid isolation of polyadenylated mRNA from a wide range of cells or tissue without intermediate isolation of total RNA. The kits efficiently extract mRNA from difficult tissues, such as plant tissue, paraffin-embedded tissue, and yeast cells, without the need for additional reagents. The kits are designed to minimize the hazards involved in mRNA extraction. They contain no guanidinium or β-mercaptoethanol. Phenol and chloroform extractions are not necessary. High yields of mRNA can be obtained rapidly, for example, in less than 30 min for extraction from 10^7 cells. **R&D Systems. Circle 139.**

■

Miniature Temperature Logger

StowAway TidbiT is the world's smallest, stand alone waterproof temperature logger. It records temperature and time data in remote locations through the use of state-of-the-art optical communications. The TidbiT logger is completely sealed and therefore waterproof up to 1000 feet. It is 1.2 inches wide by 1.6 inches tall by .45 inch thick, for



unique placement opportunities. It is available in two temperature ranges: −5° to +37°C or −20° to +70°C. Nonvolatile memory stores 7944 measurements and is reusable. It has a 3-year battery life. Data can be read out and plotted using LogBook software on an IBM-compatible or Macintosh computer. **Onset Computer Corp. Circle 140.**

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Digital Confocal Microscope

MicroTome is a digital confocal microscope with a powerful processor board for accelerated performance. It is designed to remove out-of-focus haze from microscope images at an affordable price. In most instances, images deconvolved with MicroTome are as good as those acquired using a confocal microscope at less than a quarter of the cost. MicroTome for Windows makes 100 million calculations in less than 4 s, the number required to clean up a single 512 by 512 image using the nearest neighbor logarithm. It allows the user to select among many algorithms. **VayTek. Circle 141.**

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Aerosol-Free Pipetting in PCR

Contamination remains a major area of concern in polymerase chain reaction (PCR) research. A new line of PCR pipettes and tips is designed to eliminate aerosols by combining a positive-displacement design, patented tip-locking mechanism, and longer, narrower tips. In positive displacement, the tip plunger comes into direct contact with the sample, and during dispensing, extends to the bottom of the capillary to ensure that every drip is dispensed. In the patented Tri-Continent design, the tip plunger also creates a seal inside the microsyringe, preventing any molecules, even in aerosol form, from passing into the barrel of the pipette and causing cross-contamination. **Tri-Continent. Circle 142.**

■

Literature

Guide to PCR Enzymes contains detailed information on a comprehensive family of high-quality polymerase chain reaction enzymes. It can help users select the appropriate enzymes designed for individual applications. **Perkin-Elmer. Circle 143.**

Phase Separations...Everything for Chromatography describes assorted vials, caps, stoppers, seals, and septa for all common autosamplers, as well as serum, storage, and reaction bottles, accessories, and Hamilton autosampler syringes for gas chromatography and high-performance liquid chromatography. **Phase Separations. Circle 144.**

Cambio 1996/7 is a 200-page catalog of products for molecular biology research. **Cambio. Circle 145.**

1996 Neurochemicals is a catalog that includes cholinergics, cloned neuroreceptors, excitatory amino acids, histaminergics, melatonin receptor ligands, neuropeptides, neurotoxins, and more. **Alexis Corp. Circle 146.**

Accurate '96 Antibodies Catalog is a 480-page publication that includes an extensive line of antibodies, antigens, and kits; cell separation media; complex carbohydrates; ion channel and receptor ligands; coagulation products; and more. **Accurate Chemical and Scientific. Circle 147.**

Pickering Laboratories 1995/1996 Product Catalog is an 80-page publication devoted to post-column high-performance liquid chromatography products. Included are specifications for derivatization instruments, reactors, column heaters, columns, eluents, and post-column derivatization chemicals and reagents. **Pickering Laboratories. Circle 148.**

Recycler/Degassex details an on-line degassing system for high-performance liquid chromatography (HPLC) that replaces the tedious and inefficient methods of helium sparging and ultrasonication by rapidly and efficiently removing dissolved gases from mobile phases. The small, modular unit can be used with any HPLC pump or system. **Phenomenex. Circle 149.**

High Performance Software and Reference Libraries for Mass Spectrometry describes software that provides access to more than 275,000 reference spectra. **Palisade. Circle 150.**

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ASSISTANT PROFESSOR
PLANT PATHOLOGY

Penn State University invites applications for a 48-week, **TENURE-TRACK**, 80% research and 20% teaching position available July 1, 1996. The research responsibility is to develop a program in molecular genetics of fungal plant pathogens. Potential areas include host-pathogen interactions and related aspects of plant disease research. Teaching responsibilities include a course in fungal or plant disease molecular genetics and directing graduate students. A Ph.D. from a discipline relevant to molecular genetics of fungi and plant disease and demonstrated research experience in fungal molecular genetics is required. Postdoctoral experience in molecular genetics of fungi and plant disease and demonstrated publication record and teaching experience are desirable. Salary is competititve. Applicants should submit a letter of application, curriculum vitae, academic transcripts, a written statement on research interests and teaching and professional philosophies, and three letters of recommendation to: **Dr. John E. Ayers, Search Committee Chair, Department of Plant Pathology, 308 Buckhout Laboratory, Box S-104, University Park, PA 16802-4507.** Application Deadline: April 30, 1996 or until filled. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

FIELD CROPS ENTOMOLOGY
PESTICIDE EDUCATION

Tenure-track **ASSISTANT PROFESSOR** to develop extension/applied research program on insect management in field crops and coordinate Michigan pesticide education program. Requires Ph.D. in entomology or related field with interest and expertise in working with Michigan State University (MSU) Extension staff and clientele to develop field crops insect management and pesticide education programs and interact with MSU IPM Programs. Closing date: March 15, 1996 or until a suitable candidate is found. Send curriculum vitae, transcripts, reprints, and statement of career goals and arrange to have three letters of reference sent to: **Edward J. Grafius, Search Committee Chairperson, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115. Telephone: 517-353-8695; Email: grafius@msue.msu.edu.**

ASSISTANT PROFESSOR. The Biology Department of Rutgers University-Camden seeks a geneticist for a tenure-track position beginning September 1996. Ph.D. required and postdoctoral experience preferred. This position entails teaching undergraduate and graduate courses in genetics as well as courses in introductory biology. Please send curriculum vitae, statement of research interests, and three letters of recommendation before 15 March 1996 to: **Dr. H. Lee, Biology Department, Rutgers University, Camden, NJ 08102.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR
THE UNIVERSITY OF BRITISH COLUMBIA
Department of Biochemistry and Molecular Biology

The Department of Biochemistry and Molecular Biology at the University of British Columbia (UBC) is seeking an outstanding **SCIENTIST** whom it would sponsor for a major scholarship award (e.g., MRC Scholarship) and a grant-funded position. Candidates must have a Ph.D. degree or equivalent, postdoctoral experience, and a record of accomplishment that demonstrates their promise as independent researchers. All members of the Department maintain active, well-funded research programs that encompass many areas of modern biochemistry and molecular biology. The Department expects that the successful candidate will complement and extend the Department's expertise. Start-up funds will be provided. Applicants should send their curriculum vitae, the names of three individuals willing to furnish letters of reference, and an outline (one to two pages) of their proposed research program to:

Dr. George A. Mackie, Head
Department of Biochemistry and Molecular Biology
The University of British Columbia
2146 Health Sciences Mall
Vancouver, B.C.
V6T 1Z3 Canada

The deadline for applications is March 15, 1996. The anticipated start date is July 1, 1997. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. UBC welcomes all qualified applicants, especially women, aboriginal people, visible minorities, and persons with disabilities.*

DEPARTMENT OF ZOOLOGY
UNIVERSITY OF NEW HAMPSHIRE

Applications are invited for a tenure-track position as **ASSISTANT PROFESSOR** of Developmental/Cell Biology. Individuals who use molecular methods to analyze basic developmental mechanisms and who use lower vertebrate or invertebrate model systems such as zebrafish, *Drosophila*, *C. elegans*, or marine species are particularly encouraged to apply. We require the Ph.D. in a related field. We expect active involvement in research, graduate education, and a strong commitment to undergraduate teaching. Teaching responsibilities are normally one core lecture/laboratory course, an advanced specialty course and a graduate seminar each year. The University of New Hampshire (UNH) has strong programs in marine research and education supported by excellent facilities, including a new Biological Sciences Complex and several aquatic laboratories. Review of applications will begin immediately and will continue until the position is filled. Submit curriculum vitae, names of three references, and statements of research and teaching interests to: **Developmental/Cell Biology Search Committee, Department of Zoology, University of New Hampshire, Durham, NH 03824.** *UNH is an Affirmative Action/Equal Employment Opportunity Employer and encourages applications from women and minorities.*

FACULTY POSITION/PSYCHIATRIST

The Department of Psychiatry and Behavioral Medicine at The Medical College of Wisconsin (MCW) is seeking a faculty member to develop a basic and/or clinical research program in an area of neuroscience associated with psychiatric disease. Applicants must be Board-certified or eligible in psychiatry and have a strong neuroscience background. Candidates must also be qualified for university appointment at **ASSISTANT PROFESSOR** level. Appointment at higher rank will be considered depending upon qualifications. Individual is expected to develop a strong, extramurally funded research program. Some additional clinical responsibilities are also expected. The Medical College of Wisconsin is a recognized leader in functional neuroimaging with more than $8 million currently in functional MRI research at the College. Individuals with background in psychiatric disorders and imaging are particularly encouraged to apply, although outstanding candidates in other neuroscience areas are also welcome.

Submit curriculum vitae, statement of academic research and clinical interests, and names of at least three references to: **Harry Prosen, M.D., Chairman, MCW Department of Psychiatry and Behavioral Medicine, 8701 Watertown Plank Road, Milwaukee, WI 53226.** *Affirmative Action/Equal Opportunity Employer—Minorities/Females/Disabled.*

TENURE-TRACK SCIENTIST

Cellular, Molecular or Developmental Neurobiology

National Institute of Neurological Disorders and Stroke
National Institutes of Health (NIH)

The Intramural Research Program of the National Institute of Neurological Disorders and Stroke invites applications to fill a tenure-track or tenured research position at the NIH. We are seeking exceptional candidates to establish an independent and imaginative research program in cellular, molecular or developmental neurobiology, preferably, but not necessarily, in mammalian systems. A PhD or MD and two or more years of productive postdoctoral experience are required. Research support (positions, laboratory budget and space) will be provided by NINDS. The level of appointment (tenure-track investigator or tenured scientist), salary and research resources will be commensurate with the qualifications and experience of the candidate.

Applicants should send curriculum vitae, bibliography, statement of research interests and three letters of reference to: **Dr. Story Landis, c/o Alfred L. Salas; Building 31, Room 8A23, NINDS, NIH; 31 Center Drive, MSC 2540; Bethesda, MD 20892-2540.**

Applications must be postmarked by March 31, 1996.

NIH is an Equal Opportunity Employer

Stanford University Ocean Margins Initiative Faculty Positions

A major component of future research and teaching in the **School of Earth Sciences at Stanford** will be improved understanding of ocean margins from the coastal plain to the base of the continental slope. The **Stanford University Ocean Margins Initiative** opens three tenure-line faculty positions to establish a new program focused on the geology, physics, chemistry, and engineering science of the ocean margins and the record of environmental change preserved within coastal sediments. Research areas which might fit well into the new program include, but are not limited to: coastal geochemical/bio-geochemical cycles, with an emphasis on the fluxes between human sources and sinks (organisms) and repositories (sediments); coastal paleoclimatology; ocean margin tectonic processes; subsurface fluids (water, oil, gas and associated clathrates) and flows across the coastal interface; and fluid dynamics along ocean margins.

The **Stanford Ocean Margins Initiative** seeks scientists with demonstrated records of excellence in research. Candidates must be committed to quality in undergraduate and graduate teaching. An interest in applying new technologies to the continental margin setting is particularly important. Special opportunities exist for collaborations with the Monterey Bay Aquarium Research Institute, which has remarkable experimental access to the coastal ocean, and with Stanford's Hopkins Marine Station.

We plan to begin filling the three positions in the Autumn Quarter of 1996. Appointments will be made at the Assistant Professor level for at least two of the three appointments. Senior scientists or engineers may also be considered for the other appointment. Applications, including a curriculum vitae, a statement outlining research interests that would materially contribute to the **Stanford Ocean Margins Initiative**, and names and addresses of three referees, should be sent by 31 March 1996 to:

Dr. Franklin M. Orr, Jr., Dean, School of Earth Sciences
101 Mitchell Building
StanfordUniversity
Stanford, CA 94305-2210

Stanford University has a strong institutional commitment to the principle of diversity. In that spirit, we particularly encourage applications from women, members of ethnic minorities, and individuals with disabilities.

UNIVERSITY OF SOUTH FLORIDA COLLEGE OF MEDICINE AND H. LEE MOFFITT CANCER CENTER AND RESEARCH INSTITUTE

PROGRAM IN OVARIAN EPITHELIAL CANCER PATHOBIOLOGY

The Department of Pathology and Laboratory Medicine and the H. Lee Moffitt Cancer Center and Research Institute at the University of South Florida College of Medicine seek three (3) well-qualified Ph.D. applicants for positions at the Assistant/Associate/Professor level with research interests in the area of Ovarian Epithelial Cancer Pathobiology. Appointment at the Assistant Professor level requires the applicant to have two years experience and be board eligible or certified in an appropriate area of specialization. Academic rank beyond that of Assistant Professor will be commensurate with qualifications and experience. These positions may be tenure-earning.

As part of expansion of basic research, the Department is recruiting outstanding candidates who have completed three-to-five years of relevant postdoctoral research and are able to develop independent research in the following areas: a) cell-to-cell and cell-extracellular matrix interaction during benign and malignant morphogenesis; b) genetic and molecular alterations in cancer initiation and progression; e) in vivo, including transgenic/knock-out, and in vitro models of carcinogenesis as these areas relate to ovarian epithelial cancer pathobiology. Experience with cell cycle and morphogenesis regulators, ovarian-specific gene regulation and molecular and cell biology is desired.

Candidates are expected to participate in the graduate and postdoctoral teaching activities of the Department. Research space and support packages for a period of up to three years are available for recruited candidates. Applicants should send their curriculum vitae, a statement of their research interest and the names of three references to: **Santo V. Nicosia, M.D., Professor and Chairman, Department of Pathology and Laboratory Medicine or Warren J. Pledger, Ph.D., Associate Center Director for Basic Research, H. Lee Moffitt Cancer Center and Research Institute, Office of Faculty Recruitment, 12902 Magnolia Drive, Tampa, FL 33612-9497.** Applications must be postmarked by deadline date of March 7, 1996.

The University of South Florida is an Equal Opportunity/Equal Access/Affirmative Action Employer. For disability accommodations please contact Jody Swanson at (813) 975-7894, a minimum of working day in advance. TDD#813-974-2218

BIOMEDICAL ENGINEERING CENTER
THE OHIO STATE UNIVERSITY

Biomedical Engineering Center is seeking a faculty member (**ASSISTANT, ASSOCIATE** or **FULL PROFESSOR**) with expertise in biomedical imaging. This faculty position is made possible by a Whitaker Foundation Special Opportunity Award. Applicants must have a doctorate in engineering and demonstrated expertise in biomedical image capture, processing, or display. The successful candidate will work as part of a multidisciplinary team of engineers, scientists, and clinicians, and conduct basic and applied research and development in the area of biomedical imaging. The new faculty member will participate fully in the expansion of the graduate curriculum in biomedical imaging, teach courses, advise graduate students, and develop an extramurally funded research program. This position is a tenure-track appointment. The Biomedical Engineering program at Ohio State currently has over 90 graduate students, a third of whom are working in biomedical imaging. Applicants should send résumés, a description of postdoctoral, industrial, or other professional research accomplishments, and three letters of reference in confidence to: **Dr. J. Fredrick Cornhill, The Ohio State University, Biomedical Engineering Center, 1080 Carmack Road, 270 Bevis Hall, Columbus, OH 43210-1002. Telephone: 614-292-5570; FAX: 614-292-7301.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, disabled veterans and individuals with disabilities are encouraged to apply.*

POLYMER SCIENCE AND ENGINEERING
University of Massachusetts at Amherst

The University of Massachusetts at Amherst invites applications for two tenure-track faculty positions in the Department of Polymer Science and Engineering. It is expected that both appointments will be at the **ASSISTANT PROFESSOR** level and will begin in January 1997. Applicants in all areas of polymer science and engineering will be considered; candidates with interest and experience in materials synthesis are especially encouraged to apply. Applicants should send curriculum vitae, three letters of recommendation, and brief statements of teaching and research interests to: **Chair, Faculty Search Committee, Department of Polymer Science and Engineering, Conte Polymer Research Center, University of Massachusetts, Amherst, MA 01003**. Interviews will commence by March 1, 1996. General information on the University of Massachusetts may be obtained from **http://www.umass.edu/**; general information on the Polymer Science and Engineering Department may be obtained from **http://www.umass.edu/polymer/pse.html**. *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

SALMONELLA GENETICIST

The Center for Vaccine Development, Department of Medicine, University of Maryland School of Medicine, seeks a Ph.D. or M.D./Ph.D. molecular biologist experienced in *Salmonella* genetics. This non-tenure-track **RESEARCH ASSISTANT PROFESSOR** position involves research on attenuating and expressing foreign antigens in *S. typhi*. Applicant must demonstrate experience in *Salmonella* genetics: techniques for expression of foreign antigens in *Salmonella* are highly desirable. Salary commensurate with experience and qualifications. Send curriculum vitae and names of at least three referees to: **Dr. M. Levine, Center for Vaccine Development, University of Maryland School of Medicine, 885 West Baltimore Street, Baltimore, MD 21201.** *The University of Maryland encourages women and minorities to apply and is an Affirmative Action/Equal Employment Opportunity/ADA Employer.*

ASSISTANT PROFESSOR—Physiology/Neurobiology, Department of Biomedical Sciences, Southwest Missouri State University (SMSU). Tenure-track position to teach courses in human physiology, neurobiology, and cell biology. August 1996. Earned doctorate, commitment to teaching excellence and research. Application deadline March 8, 1996. Submit qualifications in subject areas, teaching experiences, professional goals, research publications over last three years, résumé, transcripts, and three reference letters to: **Albert R. Gordon, Ph.D., Department of Biomedical Sciences, SMSU, Springfield, MO 65804-0094. Telephone: 417-836-5730.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CASE WESTERN RESERVE UNIVERSITY
SCHOOL OF MEDICINE
NEW FACULTY POSITIONS
Funded by a Grant of the Research Resources Program of the Howard Hughes Medical Institute

Case Western Reserve University School of Medicine is requesting applications from qualified candidates for tenure-track faculty positions at the **ASSISTANT PROFESSOR** level. Three positions are available in the following areas: Genetic Basis for Common Diseases (**Huntington F. Willard, Ph.D.**, Research Area Leader); RNA Processing and Metabolism (**Timothy W. Nilsen, Ph.D.**, Research Area Leader); and Regulation of Ion Channels in Health and Disease (**Antonio Scarpa, M.D., Ph.D.**, Research Area Leader). A Ph.D. and/or M.D. degree and relevant postdoctoral experience are required. Successful candidates will receive attractive start-up packages funded by a grant to the School of Medicine under the Research Resources Program of the Howard Hughes Medical Institute. They will have opportunities for a variety of interdepartmental collaborations involving basic and clinical sciences. Salary will be commensurate with qualifications and experience.

Candidates should submit a curriculum vitae, statement of research interests, and the names of three references by March 31, 1996 to: **Anne D. Dick, Program Administrator, School of Medicine Research Office, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4919.** *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.*

The Division of Urology at the University of Pennsylvania School of Medicine invites applications from Ph.D.s in biomedical sciences. Research projects in the Division of Urology are aimed at understanding the cell/molecular mechanisms underlying contractile dysfunction associated with diseases of the lower urinary tract and the male genital system. Qualifications for the positions to be filled are given below:

RESEARCH ASSISTANT PROFESSOR: We seek a person with a Ph.D. in cell/molecular biology or biochemistry; two or more years of postdoctoral training; and exceptional promise of establishing a vigorous, independent research program in an academic setting. Funding is available for a period of three years, and the position is non-tenure eligible. **RESEARCH ASSOCIATE**: Position entails collaborative research with investigators studying the molecular mechanisms involved in pathologic states of the lower urogenital tract. Qualifications include a Ph.D. degree in a scientific field and experience with techniques such as cell culture, immunofluorescence, *in situ* hybridization, and PCR. **POSTDOCTORAL POSITIONS**: Recent Ph.D.s in cell/developmental biology, molecular biology, biochemistry or physiology interested in working on projects to understand the cell/molecular biological mechanisms responsible for the function/dysfunction of urinary bladder or the corpus cavernosum penis. A letter, curriculum vitae, and a statement of research interests should be addressed to: **Dr. Samuel K. Chacko, Division of Urology, 3006 Ravdin Courtyard Building, University of Pennsylvania Medical Center, Philadelphia, PA 19104.** *University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR
BEHAVIORAL NEUROSCIENCE

Non-tenure-track opening in the Department of Behavioral Neuroscience, School of Medicine, Oregon Health Sciences University (OHSU). The appointee would join the faculty at OHSU and their affiliated faculty colleagues at the Portland VA Medical Center in offering Ph.D. and postdoctoral training in biopsychology and neuroscience supported by NIAAA and NIDA training grants and individual research grants. Candidates should have a Ph.D. degree, postdoctoral experience, and demonstrated ability to conduct independent research in an area complementary to ongoing research efforts in the department. The specific area of expertise is open. The position would require the appointee to eventually provide a portion of his or her own salary support. Candidates should send curriculum vitae, statement of research intefests, and arrange to have three letters of recommendation sent to: **John Crabbe, Ph.D., c/o Judy Sprauer, Department of Behavioral Neuroscience L351, Oregon Health Sciences University, 3181 SW Sam Jackson Park Road, Portland, OR 97201-3098. Telephone: 503-494-3523.** *OHSU is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR
AQUATIC CHEMISTRY/ECOLOGY

TENURE-TRACK nine-month position. Research in any area related to the chemistry and biology of aquatic ecosystems; more important is to contribute to our department's mission to "establish and implement research and educational programs that enhance environmental stewardship in a socially responsible manner." Demonstrated ability for establishing a research program that advances basic science in the context of a natural resource/environmental science problem relevant to Illinois. Promise for working in interdisciplinary research teams. Teaching responsibilities include introductory and upper-level/graduate courses. Ph.D. in aquatic ecosystems or a related natural resources field is required, with a strong aquatic chemistry background combined with ecology/biology. Position available August 21, 1996. To ensure full consideration send by March 15, 1996 a letter of application, statement of teaching and research interests, curriculum vitae, up to five abstracts, and the names and telephone numbers of four references to: **Joyce Canaday, Department of Natural Resources and Environmental Sciences, University of Illinois, W-503 Turner Hall, 1102 South Goodwin Avenue, Urbana, IL 61801. Telephone: 217-333-2770; FAX: 217-244-3219.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

MYCOLOGIST/CELL/MOLECULAR BIOLOGIST

The Department of Botany and Plant Pathology invites applications for a position at the **ASSISTANT PROFESSOR** level (academic year, full-time, tenure-track). The successful candidate will be expected to develop and maintain an active program in genetic, cellular, physiological, molecular, and/or systematic mycology. The position requires teaching undergraduate and graduate courses, including mycology. Applicants should have a Ph.D. degree and postdoctoral experience. Prior teaching experience (teaching portfolio) is desirable. Interactions with other departments and centers of excellence, including the Center for Microbial Ecology, the Cell and Molecular Biology Program, the Genetics Program, and the Ecology and Evolutionary Biology Program are encouraged. Salary will be commensurate with qualifications and experience. Application deadline is April 1, 1996. Send statement of career objectives, curriculum vitae, reprints of significant publications, and four letters of reference to: **Dr. Dennis W. Fulbright, Chairperson of Search Committee, Department of Botany and Plant Pathology, Michigan State University, East Lansing, MI 48824-1312. Email: fulbrigh@msu.edu.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR
BIOLOGY FS8015

Qualifications: Ph.D. in biology. Broadly trained vertebrate ecologist to teach undergraduate lecture and laboratory courses in general biology, herpetology, ichthyology, mammalogy, ornithology, and wildlife management. Interest and ability to teach general biology and various general education science courses. Teaching load is 12 credit hours per semester with opportunity for research involving undergraduate students. Share departmental responsibilities with five full-time faculty, advise students, and participate in committees. Salary negotiable (range $28,000 to $30,000) commensurate with qualifications and experience; excellent medical, dental, and retirement benefits plans. Applicants must submit letter of application describing interest and qualifications, curriculum vitae with transcripts of all college work, and three current letters of recommendation to: **Dr. Brent Ybarrondo, Biology Department, Adams State College, 208 Edgemont Boulevard, Alamosa, CO 81102**. Review of completed applications will begin March 15, 1996 and continue until a suitable applicant is hired.

FACULTY POSITION–Neurology. Seeking Board-certified or Board-eligible individual with clinical training and interest in movement disorders for Assistant Professor, University of Oklahoma, Oklahoma City, VAMC. The successful candidate will be involved with a rapidly growing geriatric program. The candidate should have experience and capability for initiating and carrying forward research in movement disorders. Contact: **James Couch, M.D., Neurology Service VAMC (127), 921 N.E. 13 Street, Oklahoma City, OK 73104.** *An Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH FELLOWSHIP

A postdoctoral research fellowship is available in the Laboratory of Epithelial Cell Biology of the Nemours Research Programs to study the regulation of chloride channel activity in cystic fibrosis. The position, available immediately, requires a Ph.D. in biochemistry or related field and experience with tissue culture, in vivo protein labeling and peptide mapping. Experience with mammalian expression systems or electrophysiology would be helpful. The laboratory is located at the Alfred I. duPont Institute in Wilmington, DE and is part of the Pediatrics Dept. of Thomas Jefferson University. The Institute offers competitive salaries and benefits packages. Send curriculum vitae and names of three references to: **Dr. William Reenstra, Dept. of Clinical Science, Alfred I. duPont Institute, P.O. Box 269, Wilmington, DE 19899.** A. I. duPont Institute is an Equal Opportunity/ Affirmative Action Employer.

Alfred I. duPont Institute
OF THE NEMOURS FOUNDATION
A CHILDREN'S HOSPITAL

Immunologist/Biochemist

At **Hewlett-Packard's Bioscience Products Organization in Palo Alto, California,** our investment in Research & Development is one of the highest among Fortune 500 companies.

An opportunity currently exists for a skilled and motivated scientist to join a multi-disciplinary team developing novel diagnostics. The candidate must have experience with antibody-based technologies including the generation, purification and characterization of hybridoma or phage display antibodies. Candidates should have experience conjugating and labeling Abs by a variety of techniques. Experience with HPLC, BLAcore, CE, PAGE, and ELISAs is necessary. Requires a PhD in Immunology or Biochemistry with 2+ years' industrial experience. Experience with product development required. Demonstrated ability to work successfully in a team environment and excellent spoken and written English a must.

Hewlett-Packard Company offers a competitive salary and benefits package. To apply for this **Palo Alto, California opening,** please send your resume to: **Hewlett-Packard Company, Attn: Ad #3421/39698, 1266 Kifer Road, MS100D-EY, Sunnyvale, CA 94086 or e-mail: elaine_yamani@hp2200.desk.hp.com** Hewlett-Packard Company is an equal opportunity employer dedicated to affirmative action and work force diversity.

HEWLETT® PACKARD

NEUROSCIENCE

THE EJLB FOUNDATION

SCHOLAR RESEARCH PROGRAMME

The EJLB Foundation awards each year up to six (6) grants for research projects in all areas of neuroscience that pertain directly or indirectly to schizophrenia and mental disease.

Eligibility for such grants is restricted to young scientists who are pursuing an independent research career and have given evidence of having significant potential. It is also a requirement that these scientists (i) have earned an MD and/or a Ph.D. degree; (ii) have completed their post-graduate training; and (iii) have been admitted after **June 15, 1991** as faculty members of a leading university, or an affiliated non-profit research centre, in Canada or elsewhere in the world.

Each grant is of CAN$300,000, is disbursed over three (3) years and is non-renewable.

The next closing date for receipt of letters of intent is **May 31, 1996.**

Full details regarding this programme and required letter of intent forms may be obtained from:

The EJLB Foundation
1350 Sherbrooke Street West
Suite 1050
Montréal, Québec
CANADA H3G 1J1.

Fax (*For inquiries only* 514-843-4080).

Mount Sinai

Senior Faculty Positions
Brookdale Center for Molecular Biology
Mount Sinai School of Medicine

Several tenured and tenure-track faculty positions at the Mount Sinai School of Medicine will be created to coincide with the opening of a new research building. The Brookdale Center for Molecular Biology invites nominations and applications at the Associate and Full Professor levels. We are looking for exceptional candidates with highly meritorious, independent research programs in any aspect of Developmental or Molecular Biology. The successful candidates will join a highly interactive, enthusiastic faculty, whose research interests are outlined below:

James J. Bieker: Gene expression controlling erythroid cell differentiation
Selina Chen-Kiang: Signal transduction by interleukin-6 and B cell differentiation
David R. Colman: Myelin formation and cell adhesion
Manfred Frasch: Control of gene expression during Drosophila embryogenesis
Mitchell Goldfarb: FGFs and their receptors: embryonic functions and signaling mechanisms
Robert A. Lazzarini: Molecular genetic approaches to neurofilament and myelin assembly
Jonathan D. Licht: Transcriptional regulation by zinc finger proteins
Thomas Lufkin: Developmental control of vertebrate embryonic body plan
Leslie Pick: Differential gene expression during Drosophila development
Francesco Ramirez: Pathophysiology of connective tissue
John Reinitz: Mathematical modeling of gene expression the Drosophila
Mary R. Rifkin: Associate Director, Educational Programs
David A. Sassoon: Molecular mechanisms controlling embryonic patterning
Heide Stuhlmann: Early mammalian development

The selected candidates will have the opportunity to work in modern laboratories designed with contiguous common equipment rooms and extensive, state-of-the-art, research core facilities. Start up funds and interim support are available for post-doctoral salaries, technical help, supplies, and equipment.

Applications and nominations (include curriculum vitae and statement of research interests), should be sent to:

Dr. Robert A. Lazzarini
Brookdale Center for Molecular Biology
Mount Sinai School of Medicine
One Gustave L. Levy Place, Box 1126
New York, NY 10029

The Mount Sinai School of Medicine is an Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

MOLECULAR BIOLOGIST

The Departments of Radiation Oncology and Pharmacology and Toxicology at the Medical College of Virginia, Virginia Commonwealth University, are offering a tenure-track faculty position at the level of **ASSISTANT/ASSOCIATE PROFESSOR** for a scientist with an established record in applying molecular techniques preferably in, but not limited to, one of the following areas: signal transduction, gene delivery, cell cycle progression, and/or radiation biology. The primary appointment will be in the Research Section of the Department of Radiation Oncology with an affiliate appointment in Pharmacology and Toxicology. Well-funded ongoing research includes transcriptional regulation, cell cycle regulation, second messenger metabolism, receptor molecular biology, and DNA repair. Competitive salary/fringe benefits and excellent start-up funds are provided. Academic rank will depend on experience, but the successful candidate must have a Ph.D. or M.D. and have completed postdoctoral studies. Send curriculum vitae, reprints of two recent articles, and the names and addresses of three references to: **Kristoffer Valerie, Ph.D., Department of Radiation Oncology, Medical College of Virginia, Virginia Commonwealth University, Box 980058, Richmond, VA 23298-0058.**

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.

BIOLOGY

ASSISTANT/ASSOCIATE PROFESSOR, tenure-track academic year position available September 1996. Teach: General Biology I and II, Cell Biology, and non-majors Biology; co-teach Developmental Biology, electives (i.e. Microbiology, Evolution, Molecular Aspects of Genetics, or Immunology), and interdisciplinary courses. Duties: guiding senior projects, science seminar, academic advising, and laboratory development. Requires: advanced degree in biology, cell biology, or related discipline from an accredited institution of higher education. Salary up to $37,159. Send résumé, cover letter, and names and telephone numbers of three professional references to: **Human Resources, Position 1692, University of La Verne, 1950 3rd Street, La Verne, CA 91750. Telephone: 909-593-3511, extension 6014; http://www.ulaverne.edu**. Screening will continue until position is filled. *Equal Opportunity/Affirmative Action Employer.*

The Department of Pathology and Laboratory Medicine at Indiana University School of Medicine in Indianapolis, Indiana is seeking an **ASSISTANT SCIENTIST/ASSISTANT PROFESSOR** to work on the molecular biology and molecular genetics of human neurodegenerative diseases. Requirements include a Ph.D. with at least five years of relevant postdoctoral experience, demonstrated productivity, and capability of seeking extramural support. Applicants must have a strong background in molecular biology with experience in the design and execution of DNA diagnostic tests; cell culture work, including transfection and transformation; and gene expression studies, including nuclear transcription and DNA binding protein assays. Experience working in a high containment biohazard facility is desirable. Applicants must be Board-certified or Board-eligible in Clinical Molecular Genetics or possess a Ph.D. in Medical Genetics. Please send curriculum vitae and names of three references to: **James W. Smith, M.D., Chair, Department of Pathology and Laboratory Medicine, Indiana University School of Medicine, 635 Barnhill Drive, MS AI28, Indianapolis, IN 46202-5120.** *Indiana University is an Equal Opportunity Employer.*

ACADEMIC POSITION IN PATHOLOGY

Medical school is seeking a full-time qualified M.D. and/or Ph.D. to teach and coordinate general and systemic pathology to sophomore medical students and to participate in the problem-based learning curriculum as a tutor. It is expected that strong biomedical research or service in the area of applicant's expertise will be developed. Rank and salary negotiable, depending on qualifications and experience. Starting date: July 1, 1996. Send curriculum vitae and three letters of recommendation to: **Dr. Panayotis G. Iatridis, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, IN 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

HERBARIUM DIRECTOR

The Department of Botany and Plant Pathology, Michigan State University, invites applications for a tenure-track 12-month position as **ASSISTANT/ASSOCIATE PROFESSOR** and **DIRECTOR** of the Michigan State University Herbarium. Position is available beginning August 16, 1996. Responsibilities include teaching undergraduate and graduate courses, maintaining an active research program in plant systematics, and directing the operations of the Michigan State University Herbarium, a collection of over 500,000 specimen. The area of research expertise of the successful candidate is open, but should involve modern approaches to research in plant systematics. A Ph.D. in botany/systematics or a related field is required. The successful candidate must have a strong commitment to undergraduate and graduate education and to herbarium development. Applicants should send a curriculum vitae, a statement of teaching interests and current and long-term goals, and three letters of recommendation by April 1, 1996 to: **Professor Patrick J. Webber, Chair of Search Committee, Department of Botany and Plant Pathology, Michigan State University, East Lansing, MI 48824-1312. Email: webber@pilot.msu.edu.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT DIRECTOR LATIN AMERICA PROGRAM

The Wildlife Conservation Society seeks a professional **CONSERVATIONIST** for a vacancy at its New York City headquarters. Will promote biological conservation in Latin America; establish program priorities and strategy; provide scientific guidance to project development and implementation; coordinate financial and administrative support for field projects. Duties will include approximately 30% travel.

Requirements: an earned doctorate or equivalent experience in a field related to the conservation of biological diversity; fluency in written and spoken Spanish and preferably Portuguese; excellent writing and verbal English skills; demonstrated administrative, interpersonal, presentation, and team management skills. Title and salary commensurate with experience.

Closing date: 31 March 1996. Send curriculum vitae, summary of research and conservation interests, and references to: **Dr. Alejandro Grajal, International Conservation, Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, NY 10460 USA.**

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

ASSISTANT PROFESSOR

Harvard Medical School, Department of Biological Chemistry and Molecular Pharmacology invites applications for one **TENURE-TRACK** position at the Assistant Professor level.

We seek individuals in the area of structural biology with a focus on NMR spectroscopy. Areas of interest include (but are not limited to) RNA structure, nucleic acid/protein interactions, and aspects of RNA function.

Applicants should submit by April 1, 1996 curriculum vitae, bibliography, and statement of research plans, and arrange for four letters of recommendation to be sent to: **Professor Gerhard Wagner, BCMP, Harvard Medical School, 240 Longwood Avenue, C1-213, Boston, MA 02115.**

Harvard University is an Equal Opportunity/Affirmative Action Employer and encourages the applications of qualified women and minorities.

COGNITIVE/BEHAVIORAL NEUROSCIENTIST
State University of New York at Stony Brook

The Department of Psychology invites applications for the position of **ASSISTANT PROFESSOR**, starting September 1996. Applicants should have a planned program of research using a systems approach to neural issues in cognition (including attention, perception, learning, memory, and language). Application deadline is March 18, 1996. Send curriculum vitae, reprints, and three letters of recommendation to: **The Biopsychology Search Committee, Department of Psychology, USB, Stony Brook, NY 11794-2500.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Employer.*

ANATOMY

Creighton University School of Dentistry is seeking an anatomist for a full-time, tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level within the Department of Oral Biology. Position is available August 1, 1996.

Position qualifications include Ph.D. or equivalent. Primary responsibilities include teaching and research. Extensive facilities are available for collaborative research. Send curriculum vitae and names of three references by April 15, 1996 to: **Dr. Joseph J. Keene, Jr., Chair, Department of Oral Biology, Creighton University School of Dentistry, 2500 California Plaza, Omaha, NE 68178.** *An Affirmative Action/Equal Opportunity Employer.*

DENVER ZOOLOGICAL GARDENS

DIRECTOR OF RESEARCH AND CONSERVATION—requires an earned doctoral degree in a scientific field related to the conservation of animal populations or other applicable fields; several years of postdoctoral zoological research; strong managerial and communications experience; and a proven record of grant development and scientific publication. Our client, the Denver Zoological Gardens, is seeking to fill a newly established position responsible for the development and implementation of research and conservation programs. This position will require the application of a broad range of administrative, financial, and communications skills; ability to work effectively with employees, volunteers, board members, and the general public; and ongoing leadership and oversight of scientific research projects. Send letter, including salary history, and résumé to: **Executive Search, Management Advisors, Inc., 5675 DTC Boulevard, Suite 230, Englewood, CO 80111-3216.** *Equal Opportunity Employer.*

BOTANIST-ENVIRONMENTAL BIOLOGIST

Beloit College announces a tenure-track **ASSISTANT PROFESSOR** position, beginning August 1996, for a botanist-environmental biologist with background in field biology and quantitative methods or modeling. Will teach Botany, Ecology, Environmental Biology and other specialty courses, serve all-College programs, and direct student research using greenhouse, herbarium, 13-hectare prairie, and 16-hectare woodlot. Send letter of application, curriculum vitae, statements of teaching and research interests, and three letters of recommendation by 1 March 1996 to: **Ken Yasukawa, Biology Search Committee, Beloit College, 700 College Street, Beloit, WI 53511.** Direct Email inquiries to: **yasukawa@beloit.edu.** *Beloit College is committed to cultural and ethnic diversity. An Affirmative Action/Equal Employment Opportunity employer.*

UNIVERSITY OF WISCONSIN–MADISON

The Department of Psychiatry is seeking a **FACULTY MEMBER** to establish an independent research program in the area of behavioral neuroscience. This individual will hold either an M.D., Ph.D., or M.D./Ph.D. and have research interests in either developmental neuroscience or functional neuroanatomy of emotional and cognitive processes related to psychopathology. Candidates should have demonstrated success in acquiring extramural grant funds. Send curriculum vitae and cover letter to: **Dr. Ned Kalin, D6/250 CSC, Department of Psychiatry, University of Wisconsin Medical School, 600 Highland Avenue, Madison, WI 53792-2475.** Unless confidentiality is requested in writing, information regarding the applicants must be released upon request. Finalists cannot be guaranteed confidentiality. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

ALLIED HEALTH/BIOLOGY

Tenure-track **FACULTY POSITION** in the Sports Medicine program in the Allied Health/Biology Department beginning September 1996. Candidates will preferably possess a Ph.D. and teaching experience at the undergraduate level in the areas of anatomy and physiology, exercise physiology, biomechanics, kinesiology, etc. Candidates with a Master's degree and clinical expertise in physical therapy or occupational therapy will also be considered. Demonstrated excellence in teaching and continued involvement in research, particularly that which could involve undergraduates, are expected. Teaching load is 12 contact hours per semester. Send résumé and three letters of reference by March 8, 1996 to: **Dr. Kathleen A. Fitz-Patrick (KFitzpatrick@Merrimack.edu), Chair, Biology Department, Box N8, Merrimack College, 315 Turnpike Street, North Andover, MA 01845.**

CDC

CENTERS FOR DISEASE CONTROL AND PREVENTION

CDC in Atlanta, Georgia, invites applications for the following position:

Director, Division of HIV/AIDS Prevention

National Center for HIV, STD, and TB Prevention

The Director, Division of HIV/AIDS Prevention (DHAP), provides leadership for a national program focused on the prevention of HIV/AIDS. The Division has a budget of $400 million and a staff of 300 in disciplines such as behavioral sciences, epidemiology, statistics, and preventive medicine. The Director plans, directs, and coordinates a national program for preventing the spread of HIV; conducts national/international surveillance and behavioral, prevention, and epidemiologic studies to determine risk factors and transmission patterns; and assists grantees in developing, implementing, and evaluating HIV prevention strategies. The Division serves as the focus within CDC and the Department of Health and Human Services for national health communication activities.

Qualifications include experience in HIV/AIDS prevention programs, the ability to work with HIV prevention groups, and the ability to provide administrative and scientific leadership for a multidisciplinary health program. An MD, a PhD, or equivalent is preferred. This Senior Executive Service position is in the career civil service; annual salary is $99,673 to $121,647. Public Health Service Commissioned Corps Officers are eligible to apply. Physicians may be eligible for a comparability allowance of up to $20,000 per year.

Interested applicants may send their curriculum vitae and names of three professional references, postmarked by April 1, 1996, to

Nancy Peterson
Human Resources Management Office
Mail Stop K07
Centers for Disease Control and Prevention
4770 Buford Highway
Atlanta, GA 30341-3724

Telephone (770) 488-1785

CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

REANNOUNCEMENT
DEPARTMENT OF FISHERIES AND WILDLIFE
MICHIGAN STATE UNIVERSITY
APPLIED TERRESTRIAL ECOSYSTEM ECOLOGIST
(POSITION #AG-1380)

This is a reannouncement of a search for an applied terrestrial ecosystem ecologist at the assistant professor level (tenure-track, 12-month appointment). This position is part of the Partnership for Ecosystem Research and Management program with Michigan State University (MSU) and the Michigan Department of Natural Resources (MDNR). The successful applicant will have a joint appointment with the Department of Fisheries and Wildlife and the Department of Geography at MSU and the position will be available Fall 1996.

Qualifications: The position requires a Ph.D. with expertise in ecosystem processes (nutrient cycling and/or energy flow). The successful applicant must also have strong interests and ability in linking ecosystem processes with wildlife population and habitat dynamics. Candidates with quantitative skills and knowledge of geographic information systems are preferred.

Major responsibilities: Conduct applied research on ecosystem ecology with implications for wildlife management and biodiversity conservation; develop and teach a graduate level course on applications of ecosystem ecology to natural resources management; participate in faculty committees, public service program and advising of undergraduate and graduate students; cooperate with the MDNR in developing management policies and practices; work effectively with state, federal, and private organizations; obtain research grants; and maintain a strong publication record.

Application: By April 1, 1996 (or until a suitable candidate is found), applicants should submit a curriculum vitae, a summary of past accomplishments, a description of future research plans and teaching interests, official undergraduate and graduate transcripts, and three representative publications. In addition, applicants should arrange for three letters of reference to be sent to:

Dr. Jianguo Liu, Search Committee Chair, Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI 48824-1222.
E-mail: JLIU@PERM.FW.MSU.EDU; Phone: 517-355-1810; FAX. 517-432-1699.

Michigan State University is an equal opportunity/affirmative action employer. Minority and women candidates are encouraged to apply. Handicapped persons have the right to request and receive reasonable accommodations.

Dean, College of Pharmacy
North Dakota State University

Applications, nominations, and inquiries are sought for the position of Dean of the College of Pharmacy. The College of Pharmacy is one of 75 schools accredited by the American Council on Pharmaceutical Education. The College offers a six-year entry level Doctor of Pharmacy (Pharm.D.) professional degree program, a two-year post baccalaureate Pharm. D. Program, along with M.S. and Ph.D. degrees in the graduate program. In addition to the departments of Pharmaceutical Sciences and Pharmacy Practice, the College also includes a four-year baccalaureate nursing degree program which is a cooperative program with Concordia College and is accredited by the National League for Nursing. The College has 34 FTE faculty in pharmacy and nursing and provides training for 290 professional and approximately 500 preprofessional students. NDSU is the land-grant university of North Dakota.

As the chief administrative officer of the College, the Dean reports to the Vice President for Academic Affairs. The Dean is responsible for administering the College including the Division of Nursing, leading the faculty, and serving as a liaison to the profession; providing faculty development opportunities:;facilitating the development and implementation of academic, research and service programs; enhancing relationships with various constituencies (e.g., alumni, industry, other health professions, government agencies); raising external funds; implementing participatory management and promoting the continued excellence of programs.

The successful candidate is required to have:
An earned doctorate (Pharm.D. or Ph.D.) from an accredited institution with a distinguished record of teaching, research and service; qualifications consistent with the requirements for the rank of full professor; established excellence in interpersonal and administrative skills; eligibility for licensure as a pharmacist in North Dakota; ability to work with nursing and the broader health care community; a strong commitment to the professional development of students; willingness and ability to raise external funds; ability to articulate the mission of the College; demonstrated ability to maintain consensus and cohesivenesss within the College; participation and achievement in professional organizations; commitment to the mission and values of a land grant university; commitment to diversity and internationalization.

Additional qualifications which are preferred include:
Professional experience outside the academic setting; and demonstrated interest in interdisciplinary activities.

Applications received by April 15, 1996 will be assured full consideration. The anticipated date of employment is August 1, 1996. Salary is negotiable. Candidates should send a letter detailing how they meet stated qualifications, along with a complete vita and contact information (including fax numbers) of a minimum of four references to: **Dr. Virginia Clark, Chair, Search Committee for Dean of Pharmacy, P.O. Box 5057, State University Station, North Dakota State University, Fargo, ND 58105-5057; Telephone: (701) 231-8211; FAX: (701) 231-7174; E-mail address: vclark@badlands.nodak.edu.** The search will be conducted in compliance with North Dakota open records law. For a complete position announcement, connect to gopher://gopher.nodak.edu 6999 (select Campus Employment Postings). *NDSU is an equal opportunity institution.*

POSITIONS OPEN

MONMOUTH UNIVERSITY
FACULTY POSITION
Assistant Professor of Biology

Tenure-track **ASSISTANT PROFESSOR** position available July 1, 1996. Ph.D. or equivalent and one to three years of postdoctoral research experience required. Commitments to quality in undergraduate teaching and in directing undergraduate research are required. A strong background in physiology (animal or plant) is required with preference given to candidates experienced in cellular and/or molecular approaches to research. The successful candidate will be expected to teach physiology, general biology, and/or histology. Preference will be given to candidates who can contribute to the development of a new M.S. program. Applicants must submit 1) a letter of application summarizing teaching qualifications, 2) curriculum vitae, 3) a one-page plan for directing undergraduate research (include support and equipment required), and 4) at least two letters of recommendation, to: **Dr. Dennis E. Rhoads, Chairperson, Biology Department, Monmouth University, West Long Branch, NJ 07764-1898.** Review of applications will begin on March 15, 1996.

Monmouth University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR faculty position available in the Department of Anesthesiology, Uniformed Services University of the Health Sciences (USUHS). This is a research-oriented clinical department with interests in malignant hyperthermia, nitric oxide and traumatic brain injury. Applicants should have a strong research background with particular emphasis in molecular and cell biology. Candidate expected to be able to assist in ongoing research endeavors, as well as to develop independent complementary investigation. USUHS has intramural grants with separate available funding for major equipment. Salary is guaranteed by the department. Applicants must possess an M.D. or Ph.D. (or equivalent) degree and have appropriate postdoctoral research experience. Send curriculum vitae with two references by 8 March 1996 to: **Geoffrey S.F. Ling, M.D., Ph.D., Division of Critical Care Medicine, Department of Anesthesiology, USUHS, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** *USUHS is An Equal Opportunity Employer.*

POSITIONS OPEN

HALL FAMILY FOUNDATION
DISTINGUISHED PROFESSORSHIP
IN MOLECULAR MEDICINE

The University of Kansas Medical Center seeks to recruit a distinguished scientist with national and international reputation and achievements in molecular medicine. The **PROFESSORSHIP** is established in partnership with the Hall Family Foundation. We seek an internationally recognized scientist with a clear history of productive, innovative, and progressive research achievements in the field of molecular medicine. The successful candidate will establish a strong research program in molecular medicine at the University of Kansas School of Medicine. The individual will be allocated research space in the new Lied Biomedical Research Building. This appointment will be at the full professor level with tenure in either a clinical or basic science department. Applicantions from interested individuals or nominations of suitable individuals are invited. Please contact: **Chair, Hall Family Foundation, Distinguished Professorship in Molecular Medicine, School of Medicine–3015 B, The University of Kansas Medical Center, 3901 Rainbow Boulevard, Kansas City, KS 66160-7300.** *The University of Kansas is An Equal Opportunity/Affirmative Action Employer.*

GROSS ANATOMY AND PATHOLOGY
TEACHING POSITIONS

Available at American University of the Caribbean School of Medicine in St. Maarten. Applicants must have a Ph.D. or M.D. degree and be devoted to teaching medical students. American curriculum taught in English. Send résumé to: **MEIO-S, 901 Ponce de Leon Boulevard, #201, Coral Gables, FL 33134. Telephone: 305-446-0600.**

BIOLOGY

Anatomy and Physiology. One-year full-time **NON-TENURE-TRACK** appointment. Teach multi-sectioned Anatomy and Physiology course, primarily for nursing students. Ph.D. in biology plus demonstrated excellence in teaching anatomy and physiology required. Screening will begin immediately and continue until position is filled. Send cover letter, résumé, three letters of recommendation, and transcripts to: **Dr. Jean Kreizinger, Biological and Environmental Sciences, Western Connecticut State University, 181 White Street, Danbury, CT 06810.** *Affirmative Action/Equal Opportunity Educator/Employer.*

POSITIONS OPEN

Vegetable Breeder. The Department of Horticulture, Oregon State University (OSU) seeks exceptional candidates in vegetable breeding from the **ASSISTANT PROFESSOR** to **ASSOCIATE PROFESSOR** level. The applicant must have a Ph.D. in plant breeding, genetics, horticulture, or closely related field with experience and competence in written and oral communication. Applicants must submit a statement of interest, curriculum vitae, transcripts, and three letters of reference. For additional information or to apply, call or write: **Dr. Charles D. Boyer, Department of Horticulture, OSU, ALS 4017, Corvallis, OR 97331-7304 Telephone: 541-737-5475.** Application deadline: April 2, 1996. *OSU is an Equal Employment Opportunity/Affirmative Action employer and is responsive to dual-career needs.*

POSTDOCTORAL POSITION

Available immediately for microsatellite marker development and analysis in loblolly pine. The two-year project involves the USDA Forest Service and International Paper Co. and augments an established SSR marker program. Molecular biology experience and strong interests in genetic research are required. Send résumé and names of references by March 15, 1996 to: **Dr. Craig S. Echt, North Central Forest Experiment Station, 5985 County Road K, Rhinelander, WI 54501 USA. Telephone: 715-362-1114; Email: cecht@newnorth. net**

GENETICS POSITIONS

We are seeking qualified applicants for **FACULTY POSITIONS** in the following areas as part of our expansion in the area of genetics: developmental genetics, DNA diagnosis and human disease gene mapping/positional clonging. Candidates are sought who can interact with a wide range of researchers in both the clinical and basic sciences and who can contribute to the development of a graduate program in genetics. Candidates must have a Ph.D. and/or M.D. degree, postdoctoral experience, and evidence of the ability to conduct a strong independent research program. Applicants should send curriculum vitae, description of research plans and have three letters of reference sent to: **Scott M. Williams, Ph.D., Chair, Genetics Search Committee, Division of Biomedical Sciences, Meharry Medical College, 1005 D.B. Todd Boulevard, Nashville, TN 37208.** *Meharry Medical College is an Equal Opportunity/Affirmative Action Employer and specifically invites and encourages applications from qualified women and minorities.*

MICROBIAL PATHOGENESIS OR GENETICS

Department of Microbiology and Immunology

University of Kentucky

The Department of Microbiology and Immunology, College of Medicine, University of Kentucky seeks candidates for a full-time, tenure-track faculty position at the **ASSISTANT PROFESSOR** level, available July 1996. Applicants should have a Ph.D. or equivalent degree, postdoctoral experience, expertise in molecular biology and host pathogen interactions or microbial genetics, and show exceptional promise in developing or maintaining a strong research program in microbial pathogenesis or genetics. The successful candidate is expected to develop/maintain an innovative, externally funded research program as well as participate in graduate and medical student teaching. This is an excellent opportunity to join an established group of faculty with research programs in procaryotic and eucaryotic pathogenesis and molecular biology and a strong predoctoral and postdoctoral training program. The Department currently has twenty tenure-track faculty with research programs in microbial pathogenesis, eucaryotic molecular biology, molecular and cellular immunology, molecular virology and tumor biology.

Excellent start-up funds, salary commensurate with experience, and modern research facilities will be provided. Applications should include curriculum vitae, representative reprints, a statement regarding research interests and future plans, as well as three letters of recommendation. Send all materials to **Dr. Carol Pickett, Chair, Faculty Search Committee, Department of Microbiology and Immunology, MS415 Medical Center, University of Kentucky, Lexington, KY 40536-0084, Telephone (606) 323-5313, FAX (606)257-8994.**

The University of Kentucky is an Equal Opportunity Affirmative Action Employer and has an affirmative duty to reasonably accommodate otherwise qualified individuals with a disability.

CORNELL UNIVERSITY

FACULTY POSITION
EXPERIMENTAL BIOPHYSICS
CORNELL UNIVERSITY

The School of Applied and Engineering Physics at Cornell University is seeking applicants for a faculty position with experimental research concentration in the application of physics to the study of biological systems. This appointment will either be at the tenure-track or tenured level depending on the qualifications and experience of the individual. Candidates must be able to develop a successful independent research program, and to participate effectively in the teaching of biophysics courses at the undergraduate and graduate level and of the undergraduate applied physics curriculum. Substantial institutional support for research program start-up will be available. Depending upon research interests, the successful candidate can benefit from association with Cornell's interdisciplinary research centers, national facilities, and national resources. These include the Cornell High Energy Synchrotron Source (CHESS); the Cornell Biotechnology Center; the NIH funded Resources: the Biomedical Technology Resource for Macromolecular Diffraction, the Developmental Resource for Biophysical Imaging and Opto-electronics and the Parallel Processing Resource for Biomedical Scientists; the Cornell Nanofabrication Facility; the Center for Theory and Simulation in Science and Engineering, a national supercomputer facility; and the Materials Science Center. Substantial interactions with the Cornell Biophysics and Bioengineering Programs and associated research programs in the Chemical Engineering, Biochemistry, Chemistry, Physics, and Neurobiology academic units at Cornell will be encouraged.

An appointment is expected to begin September 1996, but an earlier or later start is possible upon the mutual agreement of the successful candidate and the School. Applications, which should include a resume, a statement of research interest, a publication list, copies of most important publications or preprints, and three letters of recommendation or the names of three references, should be submitted to **Professor Robert A. Buhrman, Director, School of Applied and Engineering Physics, 210 Clark Hall, Cornell University, Ithaca, New York 14853-2501**. The deadline for receipt of applications is April 30, 1996, or until the position is filled.

Cornell University is an
Equal Opportunity/Affirmative Action Employer.

GLOBAL CAREER OPPORTUNITIES

LARGE SCALE FACILITY FOR MARINE PELAGIC FOOD CHAIN RESEARCH

Scientists are invited to apply for access to 'Large Scale Facility for Marine Pelagic Food Chain Research' at The University of Bergen (UoB) and The Institute of Marine Research (IMR) in Bergen, Norway. This project is part of the European Training and Mobility of Researchers (TMR) programme 'Access to Large-Scale Facilities,' and offers unique opportunities for research within planktonic food chain dynamics, early life history of fish and shellfish, fish recruitment, aquaculture and environmental health. Visiting scientists under the project can make use of installations at UoB and IMR either by participating in ongoing research in Bergen or by initiating and proposing new projects. The TMR project will cover travel and some subsistence costs, and user fees for a maximum three months' stay in Bergen for visiting scientists. Scientists from countries within the European Union or from associated countries can apply. In 1996 there will be two closing dates for applications. For projects to be initiated between April 1 and June 30 the closing date for applications will be March 8. For projects to be initiated between July 1 and December 31 the closing date for applications will be May 1. Application forms and more information about the project can be obtained at internet address http://www.uib.no/elin/lsf/ or from:

Bergen LSF
Department of Fisheries and Marine Biology
HIB, N-5020 Bergen, Norway
phone: +47 55 54 44 00 fax: +47 55 54 44 50
e-mail: lsf@ifm.uib.no

MRC
Medical Research Council
The MRC's mission is to promote and support, by any means, high-quality basic, strategic and applied research with the aim of maintaining and improving human health.

MRC Clinical Sciences Centre
Royal Postgraduate Medical School
Hammersmith Hospital
Du Cane Road
London W12 ONN

Embryonic Stem Cell Facility

Applications are sought for a Higher Scientific Officer to set up and run a core facility providing ES technology to the research groups housed in the new Clinical Research Building on the Hammersmith Hospital site. The successful applicant will have experience and proven ability in some or all of the techniques involved in generating targeted gene "knockouts". Training can be provided in some techniques if necessary. Fully equipped facilities are already in place. The facility will be supervised by Professor E. Tuddenham from whom further information is available (0181 259 8235). Applicants should have a degree in an appropriate subject and extensive relevant laboratory experience.
Salary will be within the range £16613 to £23230 inclusive of London weighting and a 4.5% pension supplement. There is scope for further performance-related increments up to a maximum of £27610 inclusive.
Application forms and job descriptions are available from the Personnel Dept. tel 0181 740 3446/7 quoting HSO/ESCF.
Closing date for completed applications 1st March 1996.

The Medical Research Council is
an Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITIONS

TWO POSTDOCTORAL POSITIONS are available in the newly established Biomolecular Structure Group within the Macromolecular Structure Laboratory. Systems under investigation include detoxification enzymes and DNA-binding proteins. Knowledge, training, and experience in X-ray crystallography essential. Knowledge and experience with molecular biology and/or protein chemistry desirable.

The ABL-Basic Research Program has state-of-the-art facilities and personnel in molecular biology, biophysics, biochemistry, and computational chemistry. The X-ray crystallography equipment includes four rotation anode X-ray generators, three image plate systems, two Siemens HI-STAR area detectors, and three sets of cryocrystallography apparatus. An extensive network of mainframe computers and work stations is accessible for various types of computational and graphical tasks. Excellent benefits and work environment; competitive salary. Please send curriculum vitae, a brief description of research experience, and three letters of references to: **Dr. Xinhua Ji, c/o Personnel Department, ABL-Basic Research Program, P.O. Box B, Building 428, Frederick, MD 21702-1201.** *Equal Opportunity Employer/Minorities/Females/Disabled/Veterans.*

POSTDOCTORAL POSITIONS
CELL BIOLOGY
MAYO CLINIC

Position available immediately to study cytoskeletal regulation of vesicle-based protein secretion and endocytosis in epithelial cells. Applicants must have a Ph.D. or M.D. degree with expertise in molecular methods such as PCR, library screening, gene cloning and sequencing, Northern and Southern blot analysis, and cell transfections.

Position available late 1996 to study the detrimental effects of alcohol on protein trafficking in cells of the liver and pancreas. Experience in biochemical, cell biological, or molecular techniques desirable. Applicants should have a Ph.D. or M.D. degree and *must be U.S. citizens or permanent residents.*

Send résumé and letters of reference to: **Mark A. McNiven, Ph.D., 1721 Guggenheim Building, Mayo Clinic, 200 First Street SW, Rochester, MN 55905.** *Mayo Foundation is an Affirmative Action/Equal Opportunity Educator and Employer.*

POSTDOCTORAL POSITION
Dr. Ching Lau

A **POSTDOCTORAL FELLOW** or **RESEARCH ASSOCIATE** position is immediately available to participate in molecular biology research of pediatric brain tumors. Requires M.D. or Ph.D. degree and experience in tissue culture, molecular biology, gene mapping and cloning techniques. Background in neurobiology and cancer research is desirable. Send curriculum vitae, summary of research interests and experience, and at least three references to: **Ching C. Lau, M.D., Ph.D., Texas Children's Hospital, Hematology-Oncology, 6621 Fannin Street, MC 3-3320, Houston, TX 77030-2399. FAX: 713-770-4276.** *Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.*

POSTDOCTORAL POSITION

Position available immediately to study ligand-stimulated trafficking and ubiquitin modification of G protein-coupled receptors in yeast. Approaches include genetics, reconstitution, cell biology, and structure/function analysis of trafficking determinants. Previous experience in signal transduction, molecular biology, genetics, or biochemistry helpful. Please send curriculum vitae and names of three references to: **Dr. Lorraine Marsh, Department of Cell Biology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Email: marsh@aecom.yu.edu.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITION in immunology available immediately. The bovine immune response to Mycobacterium paratuberculosis will be investigated in a collaborative project (Medicine–**Dr. R. Sweeney**; Immunology–**Dr. Phil Scott**). Ph.D. in immunology required, with experience in cell culture, FACS, RT-PCR preferred. Send curriculum vitae and names of three references to: **Dr. Raymond W. Sweeney, University of Pennsylvania School of Veterinary Medicine, New Bolton Center, 382 West Street Road, Kennett Square, PA 19348 USA. FAX: 610-444-4724.**

UNIVERSITY OF TORONTO
Centre for Research in Neurodegenerative Diseases
Fellowships in Neurobiology of Neurodegenerative Disease

Three **POSTDOCTORAL FELLOWSHIPS** are being offered in the following areas: cell biology of genes involved in human neurodegenerative diseases such as APP and the Presenilins; creation of vertebrate or invertebrate models of neurodegenerative disease; and human genetic linkage studies. The successful candidate will have a Ph.D. or equivalent degree and experience in the relevant areas of cell biology, molecular biology, or molecular genetics. Replies with curriculum vitae and three letters of reference should be sent to: **P. St. George-Hyslop, Centre for Research in Neurodegenerative Diseases, University of Toronto, 6 Queen's Park Crescent West, Toronto, Ontario M5S 3H2 Canada. FAX: 416-978-1878.**

POSTDOCTORAL POSITION
Cellular and Molecular Tumor Immunology

To study cellular immune mechanisms in molecular and gene therapy approaches to cancer immunotherapy in animal systems and in human translational research, available July 1996. Applicants must possess a Ph.D. and demonstrated experience in cellular immunology. Send curriculum vitae and arrange for three letters of recommendation to be sent to: **Jonathan J. Lewis, M.D., Ph.D., Immunology Program, Box 126, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. FAX: 212-794-5847.** *Memorial Sloan-Kettering Cancer Center is an Equal Opportunity Employer.*

POSTDOCTORAL (Research Associate) position at East Carolina University (ECU) School of Medicine to study regulation of glucose transporter gene expression with emphasis on lipid mediated signal transduction pathways that control both transcription of the transporter gene as well as stability of the message. Experience in molecular and cellular biology as well as biochemistry is preferred. Candidates must have a Ph.D. in biochemistry or a related science. Salary is commensurate with qualifications. Interested candidates should contact: **Phillip H. Pekala, Ph.D., ECU SOM, Department of Biochemistry, Greenville, NC 27858.** Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with a curriculum vitae and three letters of reference. *ECU is an Equal Opportunity/Affirmative Action Employer and welcomes applications from all qualified individuals.*

POSTDOCTORAL POSITION
MOLECULAR GENETICS OF HYPERTENSION

Available for the identification of genes controlling blood pressure in genetically hypertensive rats. Techniques include library construction and screening, cloning, genotyping by various PCR methods, DNA sequencing, linkage analysis, genetic map construction, positional cloning, and construction of congenic strains. Applicants must have a Ph.D. and experience in molecular biology. Experience in genetics or cytogenetics is also useful. Send curriculum vitae to: **Dr. John Rapp, Chairman, Department of Physiology and Molecular Medicine, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699.** *An Equal Opportunity/Affirmative Action Employer.*

TWO POSTDOCTORAL POSITIONS are available for the isolation, study, and engineering of two different disease resistance genes in maize. A strong background and extensive experience in molecular biology are required. Send curriculum vitae and three letters of reference to: **Dr. Jeff Bennetzen, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907. FAX: 317-496-1496. Email: maize@bilbo.bio.purdue.edu.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Synthetic bioorganic **CHEMIST** for template directed reactions using modified nucleic acid templates. Requires synthetic skills and nucleic acids experience. Starting June 1, 1996. Submit curriculum vitae, including short summary of research accomplishments, and three letters of reference to: **Dr. Kenneth D. Turnbull, Department of Chemistry, University of Arkansas, Fayetteville, AR 72701.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIPS
VISION RESEARCH

The Mason Eye Institute at the University of Missouri (MU) has multiple openings for Ph.D. graduates in the areas of basic lens or retina research. Individuals with strong backgrounds in biochemistry, biophysics, protein chemistry, or cell biology are encouraged to apply. The various areas of NIH-funded research include: 1) Modification of lens crystallins by the oxidation products of ascorbic acid via glycation mechanisms (contact **Dr. Witold Surewicz**); 2) Generation of oxygen free radicals by UV light and their effects on protein structure (contact **Dr. B. J. Ortwerth**); 3) Control of proteolysis in lens tissue and human cataracts (contact **Dr. Krishna Sharma**); 4) Biophysical and biochemical mechanisms of the chaperone action of α-crystallin (contact **Dr. W. Surewicz**); and 5) Mechanisms of lipofuscin formation in the aging retina (contact **Dr. Martin Katz**). Interested applicants should send their curriculum vitae and the names of three references to the above professors at: **The Mason Eye Institute, University of Missouri HSC, One Hospital Drive, Columbia, MO 65212.** *Applications from minorities and women are especially encouraged. MU is an Equal Opportunity/Affirmative Action Employer. The University complies with the guidelines of the Americans with Disabilities Act of 1990.*

POSTDOCTORAL ASSOCIATE

The Biotherapy Program at the University of Minnesota is seeking ten **POSTDOCTORAL ASSOCIATES.** Applicants should hold a Ph.D. or an equivalent degree in the area of chemistry, biochemistry, or molecular biology. Areas of expertise should include organic chemistry, rationale drug design, signal transduction, or gene knockout for NCI-funded research projects. Applicants should submit: a curriculum vitae, reprints of selected publications, and the names, addresses, and telephone numbers of three individuals whom the applicant has asked to submit letters of recommendation by February 29, 1996 to: **Search Committee, c/o Dr. F. M. Uckun, University of Minnesota, Box 356 UMHC, 420 Delaware Street SE, Minneapolis, MN 55455.**

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

RNA EDITING OF GLUR ION CHANNELS

POSTDOCTORAL POSITION is available to study the RNA editing of GluR ion channel gene transcripts in mammalian brain; the molecular mechanism and its relevance to neurological disorders such as Alzheimer's and epilepsy. Previous experience in molecular techniques is essential. Degree received within last three years preferred. Send curriculum vitae and three letters of reference to: **Dr. Kazuko Nishikura, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104. FAX: 215-898-3911.**

POSTDOCTORAL POSITION available immediately to study the molecular mechanism of drought tolerance in higher plants. Strong experience in plant molecular biology and biochemistry is required. Send or FAX curriculum vitae along with the names, addresses, and telephone numbers of three references to: **Dr. Zohreh Tabaeizadeh, Department of Biology, University of Quebec in Montreal, P.O. Box 8888, Station Centreville, Montreal, Quebec H3C 3P8 Canada. Telephone: 514-987-8563; FAX: 514-987-4647.**

RESEARCH ASSOCIATE

Transplant immunology laboratory at UCLA requires a **RESEARCH ASSOCIATE** with Ph.D. or equivalent proven experience in cellular and molecular immunology. Microsurgical skills in rodent allografts a major asset. Needed immediately. Please send curriculum vitae and three references to: **Daniel Shoskes, M.D., Harbor-UCLA Medical Center, Box 5, 1000 West Carson Street, Torrance, CA 90509. FAX: 310-222-2856; Email: dshoskes@ucla.edu.** *An Equal Opportunity Employer.*

POSTDOCTORAL SCIENTIST

POSTDOCTORAL/ASSISTANT SCIENTIST position in gene therapy of insulin-dependent diabetes. Candidates must have a Ph.D. or M.D. and a strong background in molecular biology. Experience in recombinant virus vector production is desirable. Send curriculum vitae to: **Dr. Michael J. MacDonald, University of Wisconsin, Medical School, 1300 University Avenue, Madison, WI 53706. FAX: 608-262-9300.**

Monsanto Company

Molecular Biologists

The Plant Gene Expression group is recruiting innovative and technically superb individuals. Permanent and postdoctoral positions are available. In addition to being members of the gene expression group, the successful individuals will also interact with multidisciplinary project teams to develop specific gene expression technologies and to evaluate and utilize these technologies for expression of target traits in transgenic crops. The individuals are expected to possess excellent molecular biology skills. Additional skills in molecular cytology, screening and assay development are beneficial. The specific projects will center around the development and use of cutting edge techniques for improving and optimizing plant gene expression systems. Minimum qualifications for permanent positions: M.S. or Ph.D. degree with at least 2 years' experience in molecular biology. To apply, please send CV or resumes to **Tim Conner, Monsanto Company, Ceregen, Mailzone U3D, 800 N. Lindbergh Blvd., St. Louis, MO 63167.**

Monsanto is an Equal Opportunity Employer. M/F/D/V. We will provide reasonable accommodations upon request.

CEREGEN

FACULTY POSITION BIOMEDICAL LASER RESEARCH

A faculty position at the level of Assistant, Associate, or Full Professor is available at the New England Eye Center, Tufts University School of Medicine, to conduct ophthalmic laser research and to develop novel techniques for optical tomography and laser surgery. Potential candidates should have a strong background in optics and lasers, good communication skills, and an ability to work closely with clinical investigators. A Ph.D. degree in physics, biomedical engineering, biophysics, optics, or related field is preferred. Successful candidate will develop his or her own independent research program. Please send CV and three letters of recommendation to Carmen A. Puliafito, M.D., Director, New England Eye Center, 750 Washington Street, Boston, MA 02111, FAX 617-636-4215.

KUWAIT UNIVERSITY
FACULTY OF SCIENCE

The Faculty of Science at Kuwait University seeks qualified candidates in Zoology (Desert Ecology, Molecular and Cell Biology, Chordate Biology, General Biology and Animal Behaviour) with a strong commitment to high quality teaching and research for appointment at the ranks of Assistant Professor, Associate Professor and Professor. Appointments are for September 1996.

Required Qualifications

Ph.D. or its equivalent
Research experience and publications
University teaching experience
Excellent knowledge of English

Benefits

- Tax-free salary (approximate rates: Professor: KD 1070-1230; Associate Professor: KD 680-840; Assistant Professor: KD 680-840 monthly depending upon years of teaching experience. (1 KD= $3.44 approx.).
- Fringe benefits include free furnished air-conditioned accommodation, annual air tickets for appointee, spouse and three dependent children up to the age of 18 to place of permanent residence, free National Health Care, paid mid-term holidays and summer vacation, gratuity at end of contract equal to one month of basic salary for each year of service, free tuition up to high school for three children in accordance with Kuwait University regulations.
- Excellent academic environment
- Appointees can apply for financial support for research projects.

Applications

- Applications and Conditions of Service may be obtained from:

  Kuwait University Office
  3500 International Drive NW
  Washington, DC 20008 Tel: 202-363-8055

- An English translation of all support documents in other languages should be enclosed.
- For appointment to the rank of Assistant Professor, a very good performance in the B.Sc. is required (minimum GPA 3 points out of 4). Please send copies of all transcripts.
- Completed applications, together with non-returnable copies of documentation, should be received within one month of the appearance of this advertisement and should be sent by express mail/ courier service directly to:

  The Dean, Faculty of Science
  Kuwait University
  P.O. Box 5969, Safat, 13060
  State of Kuwait

For inquiries use Fax: 965-4836127;
E.mail: SINNO@KUCO1.KUNIV.EDU.KW.

POSITIONS OPEN

POSTDOCTORAL POSITION
University of Massachusetts Medical Center

POSTDOCTORAL POSITION supported by an NIH training grant is available for M.D. or Ph.D. to study structure and function of cytoskeletal proteins in renal cells following various forms of injury such as ischemia, rhabdomyolysis, and oxidative injury. Experience in cell structure and digital imaging microscopy plus a knowledge of cytoskeletal structure and function is helpful. Position is available immediately. *U.S. citizenship or permanent residency is necessary for eligibility for training grant.*

Please send curriculum vitae and three letters of reference to: **Dr. Charles Kiefer, Department of Hospital Laboratories/Clinical Pathology, University of Massachusetts Medical Center, Worcester, MA 01655.**

The University of Massachusetts Medical Center is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

RESEARCH ASSOCIATE IN IMMUNOLOGY The Department of Immunology and Infectious Diseases of the Research Institute of the Palo Alto Medical Foundation seeks an M.D. or Ph.D. immunologist with two to three years of postdoctoral experience. Training in molecular biology/cell biology required. Applicant should be capable of establishing an active, independent research program as a component of a larger unit in the area of host resistance to infection.

The Research Institute of the Palo Alto Medical Foundation is a well-equipped, not-for-profit institute located in downtown Palo Alto near the Stanford University campus.

Send curriculum vitae, a description of research interests, and names, addresses, and telephone numbers of at least three references to: **Jack S. Remington, M.D., Chairman, Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, CA 94301.**

POSTDOCTORAL POSITION
CELL AND MOLECULAR BIOLOGY

POSTDOCTORAL POSITION available immediately to study cellular and molecular regulation of membrane transport proteins in disease processes such as cancer, renal failure, diabetes, neovascularization, and keloid growth. Applicans must have Ph.D. or M.D. with extensive experience in molecular techniques. Gene cloning an advantage. Send résumé and three references to: **Dr. Jay Vadgama, Director of Laboratory Research and Development, Charles R. Drew University of Medicine and Science, Los Angeles, CA 90059. FAX: 213-563-4859; Telephone: 213-563-4853.**

HARVARD MEDICAL SCHOOL

POSTDOCTORAL POSITIONS. A funded position to study gene therapy and hematopoiesis. Applicants should have a Ph.D. and/or M.D. with strong background and experience in mouse or human hematopoietic cell culture and molecular biology. Send or fax curriculum vitae, a short statement of interests, and three references to: **Jerome E. Groopman, M.D., Professor of Medicine, Harvard Medical School, Deaconess Hospital, One Deaconess Road, Boston MA 02215. FAX: 617-424-6237.**

POSTDOCTORAL OPPORTUNITIES available for biochemists with background and interest in mitogenic cell signaling mechanisms, G-proteins, protein kinases, phosphatases, calcium regulation, and hormone action in mammalian cells. Wide range of techniques and faculty interactions possible. Please send curriculum vitae and names of three references to: **Dr. John R. Williamson, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104. FAX: 215-898-9918.** *Equal Opportunity Employer.*

UNIVERSITY OF SOUTHERN CALIFORNIA

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION to study transcriptional regulation of lung development. A doctoral degree with experience in molecular biology is required. Possibility for independent work. Salary is $30,000 with fringe benefits. Contact: **Parviz Minoo, Ph.D., USC School of Medicine, 1801 East Marengo, Los Angeles, CA 90033. Email: minoo@hsc.usc.edu.**

Applications are invited for a **POSTDOCTORAL POSITION** (Research Associate) in the Biochemistry Department East Carolina University School of Medicine (ECU SOM) to study fetal growth suppression and the adult consequences of in utero growth inhibition. Research interests include the molecular mechanisms by which malnutrition, ethanol and other drugs of abuse inhibit fetal growth as well as the molecular and physiological consequences of fetal growth inhibition in subsequent adult life. Candidates for this position must have a Ph.D. in biochemistry or a related science. Interested individuals should write to: **Dr. Sam N. Pennington, ECU SOM, Brody Building Room 2W-33, Greenville, NC 27858. Application deadline is March 1, 1996.** Proper documentation of identity and employability and official transcripts will be required at the time of employment. *ECU is an Equal Opportunity/Affirmative Action University; it encourages applications from minorities and women and accommodates individuals with disabilities.*

STANFORD UNIVERSITY
POSTDOCTORAL FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS are available for research on molecular and cellular aspects of gastrointestinal disease. Faculty's current interests include—**Christine Cartwright**: Src oncogenesis; molecular mechanisms of carcinogenesis in the colon; intestinal cell growth control. **Anson Lowe**: Protein sorting in the exocrine pancreas; organelle biogenesis. **Suzanne Matsui**: Molecular biology and pathogenesis of gastroenteritis viruses; mechanisms of viral replication. **Bishr Omary**: Role of intermediate filament proteins in signaling and disease.

Stipends will be funded by an NIH training grant. Requirements are Ph.D. or M.D. and *U.S. citizenship or permanent residency.* Send curriculum vitae, date of availability and three references to: **Peggy George, Division of Gastroenterology, MSLS P304, Stanford University, Stanford, CA 94305-5487.**

Stanford University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION
TISSUE ENGINEERING

A two-year position at the Harvard-MIT Division of Health Sciences and Technology is available immediately on a NASA-funded tissue engineering project. Research involves bioreactor cultivations of tissues (e.g., cartilage, bone, heart) for medical applications, using isolated cells and biodegradable polymer scaffolds. Outstanding opportunity for studies of cellular aspects of tissue morphogenesis *in vitro* and *in vivo*. We are seeking an enthusiastic candidate with Ph.D. in the area of cell biology and documented research experience in cell and tissue culture. Please send curriculum vitae, research interests, and names of three references to: **Robert Langer, Sc.D., Massachusetts Institute of Technology, E25-342, 45 Carleton Street, Cambridge, MA 02139-4307. FAX: 617-258-8827.** *MIT is an Equal Opportunity/Affirmative Action Employer. MIT is a non-smoking environment.*

POSTDOCTORAL POSITIONS
IGFBP Transgenic Mouse Research

POSTDOCTORAL POSITIONS are available in the Department of Physiology to work on transgenic mice which overexpress IGFBP-1 and -3 and IGFBP-3 knockout mice. Applicants should have a Ph.D., M.D., or equivalent and experience in molecular biology. Preference will be given to applicants with previous research experience in the IGF field. All suitable candidates should send their curriculum vitae to: **Dr. L. Murphy, University of Manitoba, Department of Physiology, Room 435, 730 William Avenue, Winnipeg, Manitoba R3E 3J7 Canada.** *The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, Aboriginal people, and persons with disabilities. The University provides a smoke-free work environment save for designated areas. This advertisement is directed to Canadian citizens and permanent residents.*

POSTDOCTORAL RESEARCH PROJECTS at the Savannah River Site, Aiken, South Carolina, to develop and apply new technologies for characterization of microorganisms in subsurface sediments and ground water and their response to environmental perturbations. Experience in microbial ecology, molecular biology, bioremediation, environmental microbiology, environmental or chemical engineering is required. *U.S. citizenship* and degree within last three years required. Contact: **Oak Ridge Institute for Science and Education, Telephone: 423-576-8503, Reference SRS 96-02.**

Agricultural Research Service — United States Department of Agriculture

POSTDOCTORAL RESEARCH ASSOCIATE
PLANT MOLECULAR GENETICIST

Research will focus on determining the genetic and molecular control of the synthesis of the C-glycosyl flavone, maysin and its role in resistance to the corn earworm in maize. Research experience in genetics and molecular biology is required; specific experience in maize molecular genetics and/or biochemistry/molecular biology of plant flavonoid and phenylpropanoid synthesis is a plus. Ph.D. required. Salary is commensurate with experience ($35,578 to $42,641). Submit curriculum vitae and three letters of reference to: **Dr. Michael McMullen, Room 301 Curtis Hall, University of Missouri, Columbia, MO 65211. Telephone: 573-882-7606. Email: mcmullen@teosinte.agron.missouri.edu.** *Agricultural Research Service is an Equal Opportunity Employer.*

NMR SPECTROSCOPY

The Cardiovascular NMR Section at Columbia University seeks applicants for the position of **POSTDOCTORAL RESEARCH SCIENTIST.** Must have M.D. or Ph.D. degree and one to two years of postdoctoral experience in NMR spectroscopy with interest in becoming involved in studies of perfused hearts and isolated cardiac myocytes. Expertise with NMR studies of cell systems and with multiple-quantum NMR is especially desirable. Our current interests are in pursuing multinuclear spectroscopy including proton, sodium, and phosphorous. In addition, the successful candidate will have the opportunity to become involved in multinuclear MR imaging. This is primarily a research position with no clinical responsibilities. Please send curriculum vitae, a reprint of a key publication, and the names of two references to: **Dr. José Katz, Division of Cardiology, College of Physicians and Surgeons, Columbia University, 630 West 168th Street, New York, NY 10032.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position available with the U.S. Department of Agriculture, Agricultural Research Service (ARS), Vegetable Crops Research, Madison, Wisconsin. Research involves mapping and characterizing Y_2, an important gene in carotenoid biosynthesis in carrot. Goals include identification of markers closely linked to Y_2, and evaluation of carotenoids synthesized in contrasting genotypes to pursue map-based cloning of this locus. Knowledge of classical and molecular genetics and molecular biology is required. Experience in RFLP, RAPD, and other molecular markers and in gene characterization is desirable. Ph.D. required. Salary is commensurate with experience ($36,426 to $43,658). Send a curriculum vitae and three letters of reference to: **Dr. P. W. Simon, USDA, ARS, Vegetable Crops Research, Department of Horticulture, University of Wisconsin, 1575 Linden Drive, Madison, WI 53705. Telephone: 608-262-1248; FAX: 608-262-4743; Email: psimon@facstaff.wisc.edu.** *ARS is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available for a motivated individual to study genetic recombination in mammalian cells using molecular genetic approaches. Projects will focus on understanding how mechanisms for regulating genomic rearrangements may be compromised in cancer cells deficient in DNA mismatch repair. Experience in molecular biology required. Send curriculum vitae with bibliography, description of research experience, and names, addresses, and telephone numbers of three references to: **Dr. Alan S. Waldman, Department of Biological Sciences, Coker Life Sciences Building, University of South Carolina, Columbia, SC 29208.**

A two-year **POSTDOCTORAL POSITION** is available immediately for a National Institutes of Health–funded study to apply MRI/MRS techniques to rat models of acute cerebral ischemia. We seek someone trained in MR techniques. Pulse sequence programming experience is desirable. Send curriculum vitae, three references, and reprints to: **Dr. Michael Quast, Hall Magnet 1143, University of Texas Medical Branch, Galveston, TX 77555. FAX: 409-747-2182.** *Affirmative Action/Equal Opportunity Employer.*

National Center for Human Genome Research

NCHGR

at the National Institutes of Health

Postdoctoral Positions in Cancer Genetics

National Center for Human Genome Research (NCHGR)

National Institutes of Health (NIH)

The NCHGR located on the Bethesda MD campus of the NIH is positioned at the forefront of the study of human genetic disease including cancer. A Laboratory of Cancer Genetics (LCG), dedicated to the investigation of fundamental questions in contemporary cancer genetics and molecular biology, has been created. The LCG is now recruiting postdoctoral fellows with research interests and training in molecular and cellular biology. Currently, the LCG comprises:

Molecular Examination of Chromosome Rearrangements

Jeffrey M. Trent, PhD

Molecular examination of chromosome abnormalities is focused upon identifying genes important in the biology and development of cancers including emphasis on human malignant melanoma, breast and ovarian cancer. Work is focusing on quantitative analysis of gene expression to identify genes expressed between stages of cellular and tumor development. Positions involved in both genomics and functional analysis of genes involved in growth regulation of malignancy are available.

Molecular Genetic Analysis of Tumor Progression

Olli Kallioniemi, MD, PhD

Genetic mechanisms of breast and prostate cancer progression are studied using a variety of molecular genetic and molecular cytogenetic approaches, such as FISH, CGH, chromosome microdissection, microarrays, SAGE and positional cloning technologies.

Alterations of Gene Copy Number and Expression

Paul Meltzer, MD, PhD

Studies are directed at characterization of genetic alterations in cancer cells and the mechanisms which lead to their development. Areas of emphasis include the characterization of gene amplification and other chromosome alterations at the genomic and gene expression levels utilizing state-of-the-art technologies. Positions are available which emphasize molecular, biochemical, and molecular cytogenetic approaches to these problems.

If you hold a graduate degree (e.g., PhD, MD/PhD) or a professional degree (MD, DO, DDS, DMD, DVM) and less than five years previous postdoctoral experience, and would like to be considered for one these positions, please send a cover letter, curriculum vitae, bibliography, and statement of research interests to Sharon McFadden / 49 Convent Drive MSC 4470 / NIH - 49 4a38 / Bethesda, MD 20892-4470. In addition please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.

-NIH is an equal opportunity employer-

Expanding Minds

Improving Bodies

Here at Chiron, we are on the leading edge of biotechnology research and scientific advancement, producing an array of therapeutic and diagnostic tools to advance potential cures for cancer and serious infectious diseases. We currently have the following opportunity in our Drug Discovery Research group:

Postdoctoral Scientist/Scientist

In this postdoctoral-level position, you will perform innovative research to aid in the identification of small molecule receptor ligands from compound libraries. You will also develop and optimize new analytical techniques utilizing mass spectroscopy and be a member of a small independent team working in close cooperation with chemists, biologists and biochemists involved in assay development and screening.

Qualifications include a Ph.D. in Biochemistry or equivalent with a strong background in mass spectrometry and ligand receptor bioassays. Experience with database utilization, data reduction and presentation methodologies is highly desirable as is a working knowledge of the principles of protein-protein and protein-small molecule interactions.

If you have the dedication, spirit and flexibility to rise to our many challenges, send your resume to: Chiron Corporation, Human Resources, Box #96-039, 4560 Horton Street, Emeryville, CA 94608. We are an equal opportunity employer.

CHIRON

WHERE GREAT CAREERS COME TOGETHER

Stem Cell Biology

At Amgen, you'll discover 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 sixteen years.

RESEARCH ASSOCIATE

We currently seek a Research Associate to participate in the identification and characterization of new hematopoietic growth factors. Qualified candidates will have a BS/MS in Cell Biology Biochemistry, Microbiology, Physiology or a related discipline. The position also requires at least 2 years' relevant experience in mammalian cell cultures in vitro and in vivo bioassays (ideally related to hematopoiesis).

We recognize that diverse perspectives are a key factor in the process of discovery.

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. 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 e-mail your resume to: jobs@amgen.com and indicate resume as your subject or mail your resume to: Amgen, Job Code: TPSC, P.O. Box 2569, Thousand Oaks, CA 91319-2569. Please consult our on-line Job Bulletin Board at http://amgen.bio.com for information on other career opportunities available at Amgen. Principals only, please.

AMGEN®

EEO/AA Employer M/F/D/V

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available immediately for recent Ph.D.'s with suitable skills in cellular immunology and experience in T-cell cloning and epitope mapping. Our laboratory is committed to both basic and clinical research in autoimmune diseases, especially multiple sclerosis and its animal models, giving a lot of potential for professional growth. We offer competitive salaries and excellent benefits. Send résumé, research interests, and names of three references to: **Dr. F. Mokhtarian, Professor of Micro/Immunology and Medicine at SUNY, Health Science Center and Maimonides Medical Center, 4802 Tenth Avenue, Brooklyn, NY 11219.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW or **RESEARCH SCIENTIST**. Exciting opportunity to join an expanding group studying the role of scatter factor (hepatocyte growth factor) in carcinogenesis and angiogenesis. Candidates should have Ph.D. in molecular or cellular biology. Competitive salary commensurate with experience and qualifications. Send curriculum vitae to: **Dr. Eliot M. Rosen, Department of Radiation Oncology, Long Island Jewish Medical Center, 270-05 76th Avenue, New Hyde Park, NY 11040.** Long Island Jewish Medical Center is the Long Island Campus for the Albert Einstein College of Medicine. *An Equal Opportunity Employer.*

POSTDOCTORAL (Research Associate) position at East Carolina University (ECU) School of Medicine to study mechanisms of regulation of skeletal and smooth muscle contraction and the relationship of differences in regulation to disorders of muscle such as hypertension. Techniques to be used include molecular biology, enzyme kinetics, and fluorescence spectroscopy. Experience in these areas is preferred. Candidates must have a Ph.D. in biochemistry or a related science. Salary is commensurate with qualifications. Interested candidates should contact: **Joseph M. Chalovich, Ph.D., ECU SOM, Department of Biochemistry, Greenville, NC 27858.** Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with a curriculum vitae and three letters of reference. *ECU is an Equal Opportunity/Affirmative Action Employer and welcomes applications from all qualified individuals.*

FLOW CYTOMETRY MANAGER UNIVERSITY OF WISCONSIN-MADISON

Position available to oversee a multi-user flow cytometry facility engaged in biomedical research at the University of Wisconsin Comprehensive Cancer Center (UWCCC). The facility operates a FACSCAN and a FACSTAR Plus, the latter equipped with an argon, R6G dye and krypton laser. Responsibilities include facility maintainence, design of techniques and applications, the performance of procedures, administrative responsibility for the facility's daily management, and the conceptualization, development and implementation of the scientific and technical growth of the facility.

Requirements: strong background in engineering or physics, advanced skills in configurating and optimizing flow cytometry systems, extensive computer sciences experience, and excellent communication skills for consulting with and advising a diverse group of facility users. Cell or molecular biology experience desirable.

Please send complete curriculum vitae, a statement of professional interest, and names of references to: **Dr. Mark Ritter, UWCCC Flow Cytometry Committee, K4-B100, Clinical Sciences Center, 600 Highland Avenue, Madison, WI 536792.**

PHYSIOLOGIST: RESEARCH ASSISTANT

To assist in basic muscle research program. Duties: measure force and Ca^{2+} transients in intact and skinned fibers, maintain laboratory equipment, analyze data, prepare manuscripts, and coordinate laboratory personnel. Master's degree, two years of experience in job offered or two years of experience in muscle research laboratory, supported by publications. $27,600 per year, 40 hours per week. Apply in person or by résumé to: **Georgia Department of Labor, Job Order Number GA 5936635, 601 Greene Street, Augusta, GA 30903-0160** or the nearest Department of Labor Field Service Office. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH

Three positions are available (Ph.D., M.D., or equivalent) at the Deborah Research Institute: **RESEARCH SCIENTIST** (cardiac pharmacology; signal transduction); **RESEARCH ASSOCIATE** (coronary restenosis; cardiac physiology); **RESEARCH ASSOCIATE** (morphology; immunocytochemistry; electron microscopy). The Research Scientist should be a highly independent investigator with a history of extramural funding. The Research Associates should have two to five years of postdoctoral training in a related area, excellent English writing and communication skills, and a proven ability to develop independent research. More details may be requested via **Email: 75452.1476@compuserve.com.** Please send letter of application, curriculum vitae, three recent publications, and three letters of reference to: **Richard E. Klabunde, Ph.D., Director, Deborah Research Institute, 20 Pine Mill Road, Browns Mills, NJ 08015-1799.** *Equal Opportunity Employer.*

Major national patent law firm located in New York City seeks highly qualified **PH.D. SCIENTISTS** in biomedical and organic chemistry fields interested in second career opportunities in intellectual property law. Demonstrated technical writing skills essential. Competitive salaries and benefits plus opportunities for challenging assignments. Send résumé to:

Box 64, SCIENCE
1333 H Street, NW
Washington, DC 20005

Equal Employment Opportunity. Minorities/Female/Disabled/Veterans.

PH.D. BIOCHEMIST

While experience in protein biosynthesis is desirable, we will consider all candidates with strong biochemical sciences backgrounds. Send résumé to: **R. J. Bergeron, Department of Medicinal Chemistry, P.O. Box 100485, Gainesville, FL 32610-0485. FAX: 352-392-8406.** No telephone calls please.

Position(s) available immediately for a **SENIOR STAFF SCIENTIST** for the design and development of recombinant vaccines for cancer immunotherapy, in the Laboratory of Tumor Immunology and Biology (**Dr. Jeffrey Schlom, Chief**), National Cancer Institute, National Institutes of Health, PHS, Bethesda, Maryland. Non-replicating and replicating pox viruses as well as other vectors are being employed to induce specific T-cell responses to oncogene and tumor-associated gene products, both in experimental systems and in clinical trials. Studies also involve the construction of recombinant vaccines expressing multiple gene products. A background in molecular biology/virology is required. This is an appointment for two years with an option for renewal for two additional years. Salary range is $60,925 to $93,166. If interested, please call **Nancy Bagley, Telephone: 301-496-1771** to request the mandatory application/curriculum vitae requirements for Position Number CA-95-0233. *NIH is an Equal Opportunity Employer.*

RECEPTOR TECHNOLOGY

SCIENTISTS at all levels—associate, postdoctoral, junior and senior staff scientists—with expertise in molecular genetics and pharmacology, G-proteins, tyrosine kinases, drug discovery or mass screening are encouraged to apply. Based on proprietary receptor and ligand screening technologies, our company provides molecular genetic and pharmacological services to industry. Contact: **Dr. Mark Brann, Receptor Technologies, Inc., 276 East Allen, Winooski, VT 05404. Email: receptor@together.net. http://www.together.com/~receptor.**

EXHIBITION CONTENT COORDINATOR. Will research and develop content for major exhibition on the natural history of infectious diseases. Successful applicant will work closely with in-house multidisciplinary curatorial team. Qualifications: Ph.D. in immunology, microbiology, virology, or the history of science; experience in education or communication is desirable. This is a term position for approximately two years. Please send résumé with salary requirement to: **Director of Exhibitions, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.** *An Equal Opportunity Employer. No phone calls or faxes, please.*

POSTDOCTORAL RESEARCH ASSOCIATE. NIH-funded position available to participate in ongoing studies of molecular basis of mosquito egg development and related to one of the following projects: 1) ecdysterone receptor; 2) vitellogenic genes; 3) vitellogenin receptor and endocytic machinery in mosquito oocytes. Background and experience in molecular biology and biochemistry is required. Position renewable for four years. Send curriculum vitae; reprints of principal publications; and names, addresses, and telephone numbers of three references to: **Alexander S. Raikhel, Professor, Program in Genetics and Department of Entomology, S-136 Plant Biology Building, Michigan State University, East Lansing, MI 48824-1115, USA. Telephone: 517-353-7144; FAX: 517-353-3396; Email: raikhel@ibm.cl.msu.edu.**

SCIENCE WRITER

The Office of Public Affairs of a scientific society representing 25,000 members seeks a versatile **SCIENCE WRITER.** Experience required: a successful record of organizing press conferences and contacts within the media. Knowledge of science funding and congressional science politics is helpful. Should have at least five years of science reporting and writing, familiarity with neuroscience, and proven ability to make complicated concepts understandable to public audiences. Must be a self-starter capable of handling multiple projects and responding quickly to changing demands. Three-year commitment is desirable. Responsibilities include reporting and writing news releases, planning press events and conferences, and preparing a news column on issues affecting science and newsletter articles explaining the importance of basic neuroscience research. Excellent benefits, including health and pension plans. Salary is around $40,000. Mail cover letter, résumé, and three clips of science articles before March 1, 1996 to: **Science Writer, Society for Neuroscience, 11 Dupont Circle, NW, Suite 500, Washington, DC 20036.** No telephone calls, please.

SCIENCE WRITER

Dental company is looking for a **SCIENCE WRITER** with experience in periodontics (microbiology, clinical studies). A writer with U.S. experience is preferred. Send résumé to:

Box 63
Science European Office
Thomas House, George IV Street
Cambridge, CB2 1HH, UK.

ANNOUNCEMENTS

THE LOUIS AND ARTUR LUCIAN AWARD FOR RESEARCH IN CIRCULATORY DISEASES

Each year a Committee of the McGill University Faculty of Medicine confers the Louis and Artur Lucian **AWARD** ($40,000 Can.) for outstanding research in the field of circulatory diseases. The purpose of this award is to honor a scientific investigator or group of investigators whose contribution to knowledge in this field is deemed worthy of special recognition. The successful applicant is invited to spend a short period of time at McGill University to give a formal Lucian Lecture and to have interchanges with the members of the McGill community. Submissions should be received on or before April 1, 1996.

For information and requests for nomination forms, please contact:

Dr. Yves Clermont
McGill University
Department of Anatomy and Cell Biology
3640 University Street
Montreal H3A 2B2 Canada
Telephone: 514-398-6349
FAX: 514-398-5047

XX INTERNATIONAL CONGRESS OF ENTOMOLOGY

The Entomological Society of America is soliciting applications for **TRAVEL-ONLY GRANTS** for this Congress, to be held in Firenze, Italy, August 25 to 31, 1996. For application information, contact: **Dr. Anita M. Collins, USDA, ARS, Bee Research Lab, Building 476, BARC-East, Beltsville, MD 20705. Telephone: 301-504-7299; Email: acollins@asrr.arsusda.gov.** Deadline: March 15, 1996.

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH PRESENTS

An Important Educational Opportunity Primarily for Predoctoral and Postdoctoral Fellows Contemplating Careers in Basic Cancer Research

HISTOPATHOBIOLOGY OF NEOPLASIA

The Edward A. Smuckler Memorial Workshop
Supported by a Generous Grant from the National Cancer Institute

Keystone Conference Center
Keystone, Colorado
July 21 - July 28, 1996

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Betty DeMasters, University of Colorado School of Medicine, Denver, CO
Isaiah J. Fidler, UT M.D. Anderson Cancer Center, Houston, TX
Michael B. Kastan, Johns Hopkins University Hospital, Baltimore, MD
Mary-Claire King, University of Washington, Seattle, WA
John H. Lehman, Albany College of Medicine, Albany, NY
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Reuben Lotan, UT M.D. Anderson Cancer Center, Houston, TX
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Gary J. Miller*, University of Colorado School of Medicine, Denver, CO
Harold L. Moses, Vanderbilt University School of Medicine, Nashville, TN
Karl Munger, Harvard Medical School, Boston, MA
Stewart Sell, University of Texas Medical School, Houston, TX
Patricia A. Thomas, University of Iowa Hospital and Clinics, Iowa City, IA
Ann D. Thor, Northwestern University, Chicago, IL
Frederic M. Waldman*, University of California, San Francisco, CA

Additional Faculty to be Announced

**Member of the Workshop Executive Committee*

APPLICATION DEADLINE: APRIL 30, 1996

Further Information: American Association for Cancer Research • Public Ledger Building
150 S. Independence Mall West • Suite 816 • Philadelphia, PA 19106-3483
Telephone: (215) 440-9300 • FAX: (215) 440-9313 • E-mail: AACR@aol.com

The University of Georgia
Department of Microbiology
Georgia Research Alliance

Eminent Scholar in Microbial Physiology

The University of Georgia seeks applications and nominations for a newly created endowed chair, the Georgia Research Alliance Eminent Scholar in Microbial Physiology. Candidates will have achieved international prominence in microbial physiology and merit appointment at the level of Full Professor. The Eminent Scholar will conduct creative research in the physiology of diverse microorganisms, take a leading role in promoting microbially based industries, foster collaborative research endeavors with other leading research institutions in Georgia, and participate in undergraduate and graduate instruction. The successful candidate will be a faculty member of the Department of Microbiology and receive generous support to enhance his or her research interests. Opportunities exist for participation in the NSF-funded Research Training Group on "Prokaryotic Diversity– an Organismal Approach".

Applications should include description of research program, curriculum vitae and names of three references. Nominations should include the nominee's qualifications, address and phone number. Applications and nominations for women and minorities are especially encouraged. Applications and nominations should be sent to: **Chair, Eminent Scholar Search Committee, Department of Microbiology, Biological Sciences Building, University of Georgia, Athens GA 30602-2605** (tel. 706-542-1434, fax. 706-542-2674) and be received by June 1, 1996. The target date for filling this position is January 1, 1997.

The University of Georgia is an
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The University of Georgia

ANIMAL HEALTH DEVELOPMENTAL RESEARCH SCIENTIST

The Worldwide Animal Health Business of Pharmacia & Upjohn, Inc. is accepting applications for a position in Worldwide Product Development for a Clinical Research Scientist. Responsibilities will center on the role of Project Leader of multidisciplinary developmental teams. In addition to leading the team, the candidate will be responsible for designing, conducting and reporting clinical trials characterizing the test compounds efficacy. Project leaders are responsible for leading the effort for approval of Animal Health products worldwide. Projects will include both new chemical entities and new claims for existing products.

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You must refer to Position #305 in all correspondence.

Pharmacia & Upjohn

UCSB
UNIVERSITY OF CALIFORNIA
SANTA BARBARA

VICE CHANCELLOR FOR RESEARCH

The University of California, Santa Barbara, is searching for a Vice Chancellor for Research.

The Vice Chancellor for Research will be the principal campus officer in matters of research policy and administration. Responsibilities will include planning, coordination, and development of infrastructure for campuswide research activities. The Vice Chancellor will be expected to foster active relationships between the University, government and industry, and to provide guidance and leadership for interdisciplinary research initiatives and technology transfer. He or she will supervise an Office of Research that helps the faculty identify and obtain funds from public and private sources, provides administrative support for contracts and grants, and has oversight responsibility for integrity in all aspects of the research enterprise at UCSB.

A candidate for this position should have a distinguished record of leadership in research and in research administration. He or she should also have demonstrated sensitivity to the broad range of research needs at a major research university. This individual will be expected to qualify for a tenured academic position at UCSB.

The Search Advisory Committee is currently soliciting nominations and accepting applications for this position. Nominations and applications should be sent to:

Professor James S. Langer, Chair
Search Advisory Committee for the Vice Chancellor for Research
c/o Ms. Susan Cochran
Office of the Chancellor
5221 Cheadle Hall
University of California, Santa Barbara
Santa Barbara, CA 93106-2030

Review of applications begins mid-February. The search will remain open until the position is filled. Refer to Position #95-12-019 BO.

UC-Santa Barbara is an Affirmative Action/Equal Opportunity employer committed to fostering diversity in its faculty, staff and student body, and welcomes applications from minorities, women and persons with disabilities.

MEETINGS

The Foundation for Advanced Cancer Studies
invites your participation in the

Twelfth Annual Meeting on Oncogenes

June 18-22, 1996
Hood College
Frederick, Maryland

Organized by

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We invite the participation of investigators involved in oncogene and tumor suppressor gene research. The scientific organization of this meeting provides a forum for researchers at all levels to present and discuss their latest research accomplishments through the assemblage of an intense scientific program including both oral and poster presentations. Please plan to attend.

Registration (including housing and meals) is $600.00 US.
Abstract submittal deadline is April 12, 1996.

For details, please contact:

Margaret L. Fanning
Conference Office, FACS
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EXECUTIVE DIRECTOR

Oracle, Arizona

As of January 1, 1996, Columbia University has assumed management responsibilities for Biosphere 2 -- the unique biosystem laboratory in the Arizona desert outside Tucson -- and is integrating the facility into the University's science education and research mission.

Columbia seeks a founding Executive Director to oversee this 501(c)3 teaching, learning, and research operation and to spearhead 1) the transformation of its public and visitor programs and facilities; 2) the creation of new educational programs in the environmental sciences linked to Columbia; 3) the coordination of a world-class research agenda in global climate change, biodiversity, and sustainable agriculture linked to Columbia's world renowned Lamont-Doherty Earth Observatory.

The Executive Director will oversee a staff of 130, $10-15 million operating budget, and 250-acre campus including the 3.5 acre Biosphere, a visitors' center, hotel, conference facilities, research and administrative buildings, and a working ranch.

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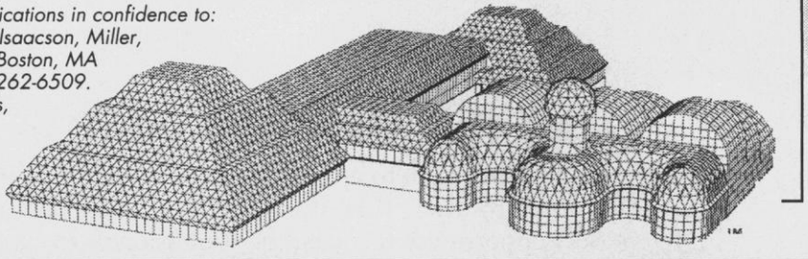

ASSISTANT PROFESSOR

Terrestrial Plant Systematics/Biodiversity

Department of Botany

The University of British Columbia

The Department of Botany, University of British Columbia, invites applications for a tenure-track position as Assistant Professor. Appointment at a higher rank may be considered for a woman with exceptional qualifications. Candidates must have a PhD degree in modern plant systematics. The candidate will be expected to establish a strong competitively-funded research program and to participate as a member of the Centre for Biodiversity Research which promotes interaction among botanists, zoologists, microbiologists, and forest biologists. Specific research interests could include molecular plant systematics, plant evolution, or conservation biology of plants. Preference will be given to candidates with excellent communication skills, a strong publication record and enthusiasm for teaching excellence. The Department shares in the teaching of 1st and 2nd year Biology courses, and preference will be given to individuals who can also teach an upper level course in one or more of plant systematics, plant evolution, conservation biology, biodiversity, and field botany for graduate students.

The University of British Columbia welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The position is subject to final budget approval.

Anticipated starting date: **January 1, 1997**.

Applications, which must include a curriculum vitae, copies of publications, a statement of research and teaching interests, and the names of at least three referees, should be submitted **by May 1, 1996** to:

Dr. Iain E.P. Taylor
Department of Botany
University of British Columbia
3529-6270 University Boulevard
Vancouver, B.C. CANADA V6T 1Z4

VIROLOGIST

Senior Scientist/Investigator

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, has an opportunity for a Scientist to join our Department of Molecular Virology and Host Defense.

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Located in our state-of-the-art research facility in suburban Philadelphia, SmithKline Beecham offers an excellent compensation/benefits/relocation package. Qualified candidates should forward a resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Job Code H6-0539, P.O. Box 2646, Bala Cynwyd, PA 19004. We are an Equal Opportunity Employer, M/F/D/V.

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La Jolla, CA at The Scripps Research Institute, October 4-5.

To pre-register, please submit your resume or CV via fax: (202) 289-6742, or via e-mail: bioscience@aaas.org. Please indicate to which bioSCIENCE Career Fairs you would like to have it distributed. Please remember to bring multiple copies of your CV or resume with you to the Career Fairs.

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Issue Date	Bonus Distribution
8 March	German Society for Cell Biology, 24-28 March, Hamburg, Germany
	Human Genome Meeting, 22-24 March, Heidelberg, Germany
15 March	Society for Experimental Biology, 24-29 March, Lancaster, UK
	Brain Research Association, 25-27 March, Newcastle, UK
	Scciety for General Microbiology, 26-29 March, Warwick, UK
	British Societies for Cell Biology & Developmental Biology, 27-30 March, York, UK
	USGEB (Union Schweizerischer Gesellschaften fur Experimentelle Biologie), 27-29 March, Zurich, Switzerland
29 March	European Society of Human Genetics, 11-13 April, London, England
5 April	Biochemical Society, 16-19 April, Liverpool, UK
12 April	Analytica, 23-26 April, Munich, Germany
	Physics World, 23-25 April, Telford, UK
24 May	European Neurological Society, 8-12 June, The Hague, The Netherlands
31 May	33rd European Renal Association, 17-20 June, Amsterdam, The Netherlands
14 June	European Society of Human Reproduction & Embryology, 30 June - 3 July, Maastricht, The Netherlands
21 June	FEBS (Federation of European Biochemical Societies), 7-12 July, Barcelona, Spain
28 June	IUBMB (International Union of Biochemistry & Molecular Biology), 14-16 July, Edinburgh, Scotland
5 July	Space Science Research 14-19 July, Birmingham, UK

Issue Date	Bonus Distribution
16 August	11th European Congress on Microscopy 26-30 August, Dublin, Ireland
23 August	RSC 24th Symposium of European Peptide Society, 8-13 September, Edinburgh, Scotland
30 August	British Association Festival of Science, 9-13 September, Birmingham, UK
	36th Annual Meeting European Society of Pediatric Endocrinology, 15-18 September, Montpellier, France
6 September	40th Congress of German Society of Psychology, 22-26 September, Munich, Germany
	19th Annual Meeting European Neuroscience Association, 23-27 September, Strasbourg, France
13 September	12th European Congress on Multiple Sclerosis, 26-28 September, Copenhagen, Denmark
27 September	Science in Action (Lab Expo), 8-11 October, London, UK
1 November	ILMAC (International Exhibition for Chemical Technology & Biotechnology), 12-15 November, Basel, Switzerland
8 November	MEDICA '96, 20-23 November, Dusseldorf, Germany
29 November	Biochemical Society & British Society for Immunology, 11-13 December, Harrogate, UK
6 December	British Ecological Society, 16-19 December, Durham, UK
	British Pharmacological Society, 17-20 December, Brighton, UK

Schedule may be subject to change.

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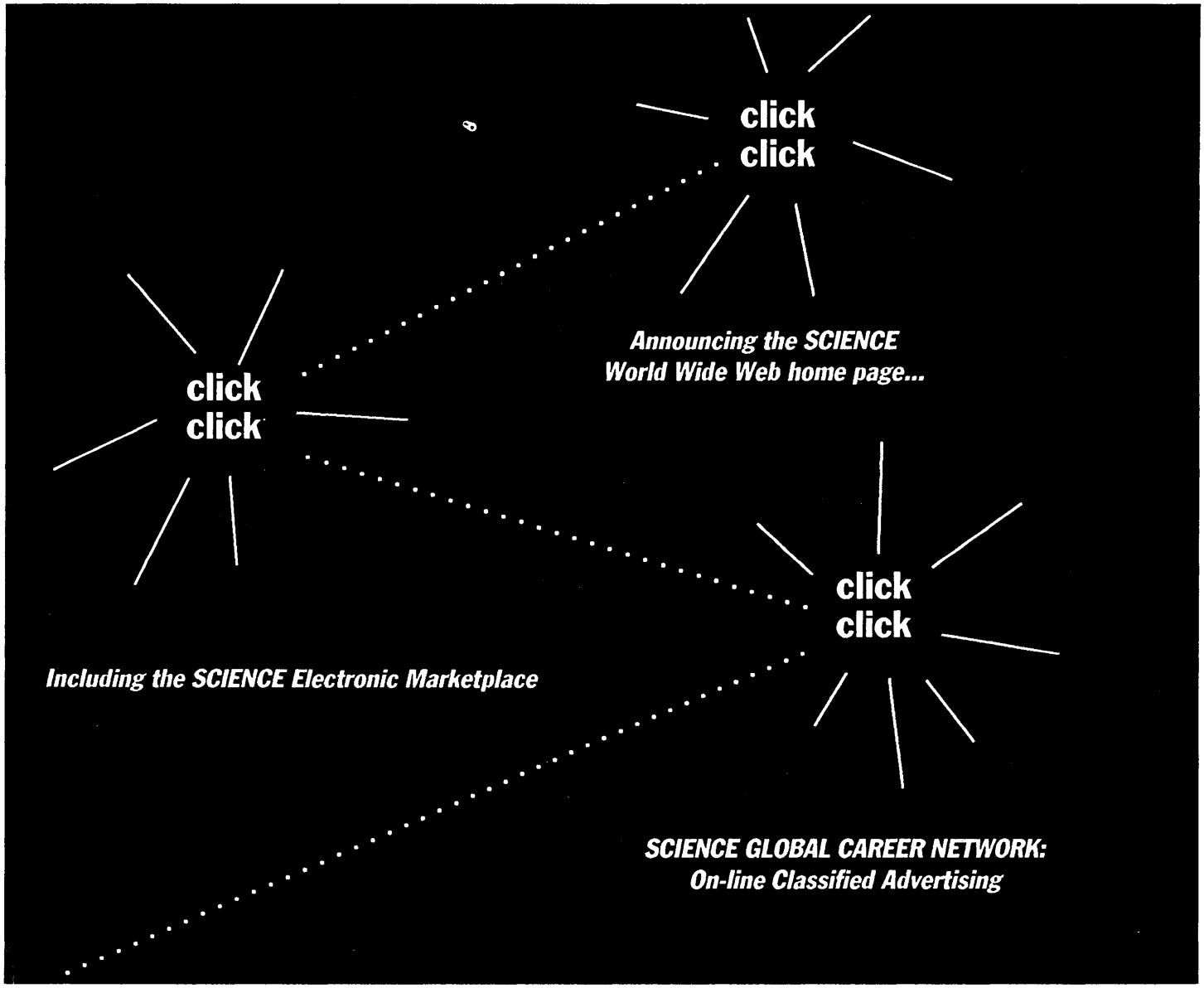

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Theme Symposia

Prominent physicians and scientists highlighting multidisciplinary areas of biomedical research and clinical investigation.

Human Immunodeficiency Virus Disease: Epidemiologic, Pathogenic, and Therapeutic Considerations
Anthony S. Fauci, National Institute for Allergy and Infectious Diseases

Transgenic Models of Metabolic Disease
C. Ronald Kahn, Joslin Diabetes Center
E.M. Rubin, University of California

Intracellular Membrane Trafficking
Jennifer Lippincott-Schwartz, National Institute of Child Health and Human Development

Ion Transport and Disease***
H.William Harris, Children's Hospital, Boston
Mark T. Keating, University of Utah

Health Outcomes Research
Allan S. Detsky, University of Toronto

Regulation of Apoptosis: Cellular, Molecular and Genetic Factors
John D. Mountz, University of Alabama at Birmingham

Translational Research in Dermatology*
Juoni Uitto, Thomas Jefferson Medical College

Delivering Information to Clinicians in the Era of National Networking***
Edward H. Shortliffe, Stanford University School of Medicine
David Lipman, National Library of Medicine

Developmental Biology: Organogenesis***
Jeffrey A. Whitsett, Children's Hospital Medical Center, Cincinnati
Jeffrey I. Gordon, Washington University School of Medicine

The New Biology of Obesity
Jeffrey S. Flier, Harvard Medical School

Emerging Infections***
Ruth Berkelman, National Center for Infectious Diseases
Monica M. Farley, Emory University School of Medicine

Training in Subspecialty Medicine: Current Status and Public Policy
Eric G. Neilson, University of Pennsylvania
Robert J. Mayer, Harvard Medical School

Abstract Presentations

Original abstracts will be presented either in oral session, chaired by teams of senior investigators, or in poster sessions.

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James B. Dale, University of Tennessee School of Medicine

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Christine Seidman, Harvard Medical School

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Dorothea Zucker-Franklin, New York University

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George Bosi, Memorial Sloan Kettering Cancer Center

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Pamela G. Williams-Russo, Cornell University Medical Center

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Tadataka Yamada, University of Michigan School of Medicine

Immunology/Allergy/Rheumatology
William J. Koopman, University of Alabama at Birmingham

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Mark A. Supiano, University of Michigan School of Medicine

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Leslie DeGroot, University of Chicago Medical Center

Renal/Hypertension
Barry M. Brenner, Harvard Medical School

Inflammation
William M. Nauseef, University of Iowa

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Herbert H. Samuels, New York University

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J. Chris Gillin, University of California, San Diego

Cytokines/Growth Factors
Derek LeRoith, National Institute of Diabetes and Digestive and Kidney Diseases

Dermatology*
Juoni Uitto, Thomas Jefferson Medical College

Gene Therapy
Elizabeth G. Nabel, University of Michigan

Satellite Symposia/ Meetings

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Association of Subspecialty Professors
May 4-5, 1996

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May 4, 1996

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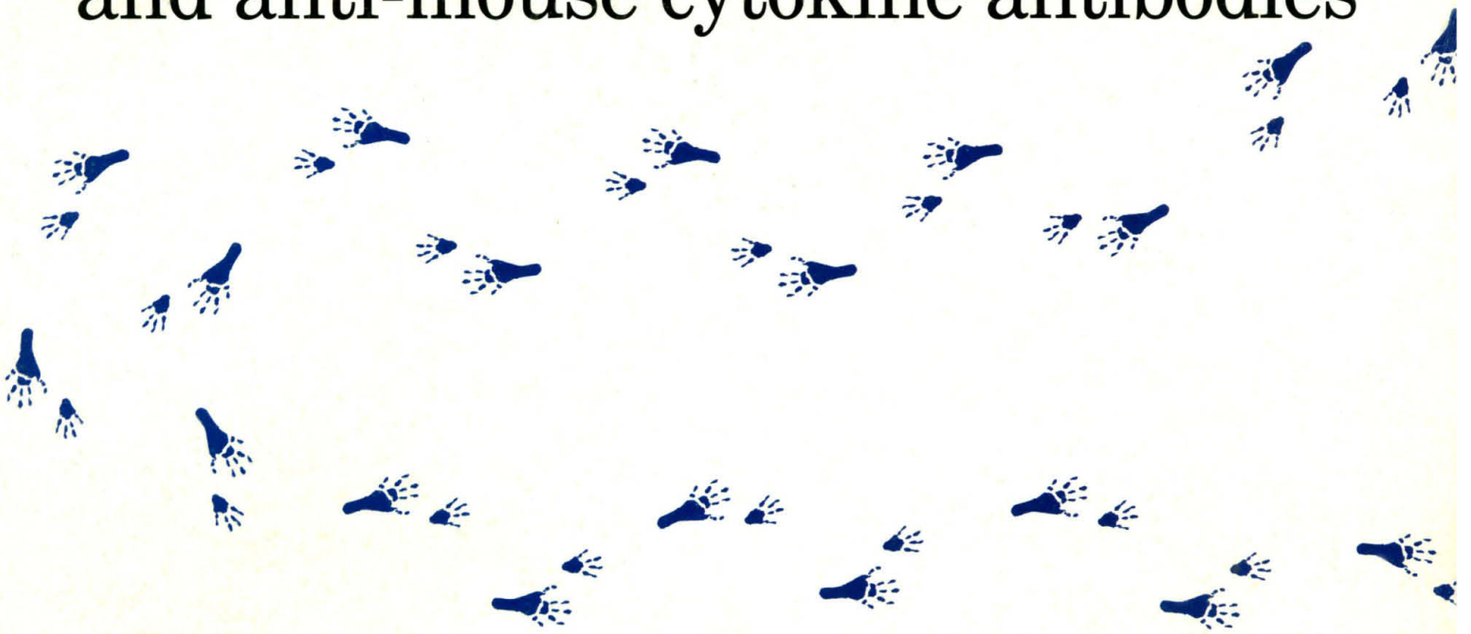

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