Gordon Research Conferences

Carlyle B. Storm, Director

Fixed Conference Fees—1995

	Switz.	RI	NH	Irsee
Conferee (double)	$745	$525	$510	$770
Conferee (single)	$820	$575	$560	$835
Conferee (non-res.)	$570	$420	$420	$595
Guest (double)	$595	$375	$360	$620
Guest (single)	$670	$425	$410	$685
Guest (non-res.)	$420	$270	$270	$445

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.

The 1995 Spring Conferences will be held in the Tuscany region of Italy, and Summer Gordon Research Conferences will be held in New Hampshire and Rhode Island.

Attendance is limited—it is recommended that applicants apply immediately for early consideration by the Chair. Feel free to copy the application form, before it is completed, 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 on these Conferences can be obtained via e-mail:
via **gopher:**
hackberry.chem.niu.edu port 70
via **world-wide web:**
http://hackberry.chem.niu.edu:70/0/webpage.html
via **anonymous ftp:**
hackberry.chem.niu.edu
(in the pub/Conferences/Gordon Conferences directory)

Poster Sessions: Most conferences have poster sessions. Those interested in presenting a poster at a conference should include citations to recent work and a poster abstract (text < 250 words). Apply directly to the conference chair or his designated poster chair.

Aging, Biology of

Il Ciocco (Site 1)
Barga, Italy (Tuscany)

J.R. Smith, O.M. Pereira-Smith, co-chairs
T. Johnson, vice chair

7 May — 12 May

Cruickshank Lecture: "Novel Genes Involved in Senescence and Cancer", R. Sanger
"Proliferative Homeostasis and Aging" G.M. Martin
Aging and Cancer
G. Stein
E. Wang
Cellular Aging — I
Cell Cycle Control
J. Campisi, G. Gabbiani
J. Pines, S. Shall, V. Sorrentino
Cellular Aging — II
Transcription Control
R. Sager, S. Shall
J. Campisi, T. Maciag, G. Stein
Osteoporosis
D. Hamerman
P.D. Delmas, A. Kahn, J. Pfeilschifter
Alzheimer's Disease
G.M. Martin, M.T. Ramacci
L. Amaducci, J. Carney, E.M. Mandelkow, R. Tanzi
Evolution and Experimental Manipulation of Lifespan
E. Masoro, J. Vaupel
T. Kirkwood, A. Richardson
Longevity Assurance Genes—I
A. McCormick
M. Jazwinski, C. Kenyon, J. Tower
Longevity Assurance Genes—II
T. Johnson
N. Fabris, R. Miller, M. Peacocke

Analytical Chemistry

New Hampton School
New Hampton, NH

M.J. Wirth, chair
T.D. Harris, vice chair

6 August — 11 August

Single Biopolymers
N. Dovichi, J. Reutt-Robey
T. Beebe, R. Keller, G. Lee, R. Smith
Microscale Bioanalytical Chemistry
D. Rothman, J. Sweedler
O. Andersen, R. Kennedy, M. Ramsey, E. Yeung
Small Surface Areas
J. Charles, D. Raftery
J. Davis, M. Johnston, J. Sidles, J. Trautman
Small Volumes in Polymers
B. Chase
R. Murray, A. Myers
Young Investigators Session
H. Blount
Techniques on the Horizon
C. Korczeniewski
F. Fan, J. Spence

Angiogenesis and Microcirculation

Salve Regina University
Newport, RI

R. K. Jain, chair
J. Folkman, vice chair

13 August — 18 August

Molecular Mechanisms of Angiogenesis
J. Folkman
N. P. Bouck, W.Cavance, D. A. Hanahan
Angiogenesis in Health and Disease
Bruce Zetter
D. Cheresh, W. Risau, E. H. Sage
Microcirculation in Health and Disease
R. K. Jain
N. Granger, R. Melder, K. Messner
New Insights from Advances in Microvascular Technology
M. Itaglietta
D. Birk, M. Suematsu
Role of Host Cells in Angiogenesis
I. Fidler
P. D'Amore, S. Galli
VEGF/VPF
Harold Dvorak
N. Ferrara, E. Keshet
Anti-Angiogenesis
L. Liotta
C. Hellerquist, W. Stetler-Stevenson, P. Thorpe
Keynote Address
J. Folkman
Microcirculation in Genetically En-gineered Animals
M. Gimbrone
M. Fishman, T. Tedder, D. Wagner
Poster Sessions: **G. Schmid-Schönlein**

Angiotensin

Il Ciocco (Site 1)
Barga, Italy (Tuscany)

D. Ganten, chair;
T. Inagami, vice chair

30 April — 5 May

Clinical Genetics
S. Harrap
P. Corvol, J.-M. Lalouel, M. Lathrop
Molecular Aspects of Therapy: New Treatment Modalities (Gene Therapy)
J. Leiden
D. Dichek, R. Morishita, E. Nabel
Drug Targets in the RAS and Related Systems
J. Reid
M. Clozel, A. Seymour, M. Wayner
Ang II Receptor, Signal Transduction
M.I. Philips
J. Kakuchi, M.B. Marrero, C. Summers
Mineralcorticoids
C.R.W. Edwards
K. Parker, B. Rossier, P.M. Stewart
New Transgenic Technologies
K. Gross
K. Murakami, M. Rajewski, O. Smithies
The Tissue RAS
T. Unger
F. Mendelsohn, R.E. Pratt, H. Urata
Vascular Biology
G. Owens
P. Delafontaine, Y. Kitami, E. Sage

Applied and Environmental Biology

New Hampton School
New Hampton, NH

J. M. Suflita, chair
P. M. Pritchard, vice chair

2 July — 7 July

Microbial Evolution and Adaptation
R. Tanner
P. Foster, G. Petsko, E. Stackenbrandt
Ecological Importance of Antimicrobials
A. Demain
F. O'Gara, M. Zasloff
Microbial Cycling of Carbon and Trace Gases
M. Klug
R. Conrad, H. Drake, R. Smith
Eucaryotic Biotransformations
J. Nakas
J. Bennett, L. Wolfe
Issues in Marine Microbiology
A. Palmisano
C. Cavanaugh, S. Chisholm, J. Fuhrman
Gastrointestinal Tract Microbiology and Ecology
J. Robinson
C. Cerniglia, A. Sayler
Novel Biotransformations and Bioconversions
H. Pritchard
D. Gibson, H. Sethunathan, L. Y. Young
Special Lecture
J. Cooney
A. Zehnder
Microbes, Metals, Messages and Surfaces
J. Bauld
T. Beveridge, J. Gundersen, S. Molin

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Atherosclerosis

Kimball Union Academy
Meriden, NH

A. Chait and P. Libby, co-chairs

18 June — 23 June

Genetic Aproaches to the Analysis of Atherosclerosis as a Model of a Complex Disease
J. Breslow
J. Breslow, E. Lander, A. J. Lusis
Diabetes and Atherosclerosis
A. Chait
J. Brunzell, J. Flier, H. Vlassara
Mechanical Activation of Vascular Cells
M. Gimbrone
P. Davies, N. Resnik
Links between Thrombosis and Atherosclerosis
J. Witztum
E. Haber, G. Hansson, G. Wick
Scavenger Receptors
M. Krieger
M. Freeman, S. Gordon, T. Kodama
Mechanisms and Manipulation of the Plaque's Microvasculature
J. Folkman
Intracellular and Extracellular Lipid Transport
A. Tall
I. Goldberg, H. Lodish, J. Oram
Extracellular Matrix Interactions in Atherogenesis
P. Libby
C. Brinkerhoff, A. Cowes, Z. Gallis

Atmospheric Chemistry

Salve Regina University
Newport, RI

S. E. Schwartz and L. Newman, co-chairs

18 June — 23 June

New Approaches to Characterizing Particles and Aerosols
O. B. Toon
F. Arnold, D. Murphy, M. J. Rood
Nucleation and Ultrafine Particles
S. Slanina
F. Eisele, P. H. McMurry
Aerosol Dynamics
R. L. McGraw
S. E. Pratsinis, R. C. Flagan, F. Raes
Aerosol Climatology
A. D. Clarke
J. Ogren, J. Prospero, R. Jaenicke
Aerosols and Clouds I
J. C. Wilson
S. M. Kreidenweis, R. Leaitch, P. Mirabel
Aerosols and Clouds II
A. Flossmann
J. Heintzenberg, W. Hoppel, S. J. Ghan
Polar Stratospheric Clouds
D. R. Worsnop
A. Tabazadeh, A. Laaksonen, D. G. Imre
Hemispheric to Global Modeling of Aerosols
J. P. Friend
L. Tarrason, J. Lelieveld
Climate Influences of Aerosols
C. Sloane
Y. Kaufman, J. J. Seinfeld

Atomic Physics

Brewster Academy
Wolfeboro, NH

C. H. Greene, chair
P. Gould, vice chair

2 July — 7 July

Atom Optics
A. Aspect, D. Pritchard
Laser Cooling and Trapping
D. Wineland, P. Zoller
Atoms in Strong Fields
A. F. Starace
L. DiMauro, T. Gallagher, A. Suzor-Weiner
Bose-Einstein Condensation and Cold Collisions
E. Cornell
J. Javanainen, W. Ketterle
Semiclassical or Quantum Chaotic Systems
J. Delos
D. Kleppner
Electron Collisions and Recombination
F. Robicheaux
Optical Lattices
W. D. Phillips
Few-Electron Atoms
N. Berrah

Barrier Function of Mammalian Skin

Proctor Academy
Andover, NH

H. E. Boddé, chair
P. M. Elias, vice chair

13 August — 18 August

In Vivo Characterization of Skin Barrier and Transport Properties
C. Peck
J.-P. Marty, A. Rougier, B. Schroot
Skin Barrier Models
P. Werz
B. Forslind, J. Thewalt
The Skin Barrier in Health and Disease
H. Schaefer
J. Bouwstra, M. Fartasch, L. Halkier-Sorensen
Overcoming the Metabolic Barriers in Skin
H. Merk
H.-P. Merkle, J. Tsai
Chemical Skin Barrier Perturbation
J. Hadgraft
P. Cornwell, G. Lee, M. Turunen
Dynamics of the Skin Barrier
K. Feingold
R. Ghadially, J. Vanable
Electrical Skin Barrier Perturbation and Penetration
G. Rao
V. Préat, S. Venkateshwaran, H. Westerhoff
Debate: *The Stratum Corneum is Alive; Yes or No?*
B. Parry
P. Elias and N. Kitson, team leaders

Biocompatibility and Biomaterials

Holderness School
Plymouth, NH

B. D. Ratner, chair
J. Hubbell and R. Pilliar, co-vice chairs

23 July — 28 July

The Biology Driving Biocompatibility
T. A. Horbett
D. Lauffenberger
To Be Named
The Foreign Body Reaction
B. D. Ratner
J. Anderson, J. Eaton
The Bone-Biomaterials Interface
R. Pilliar
J. Davies, P. Thomsen, T. Einhorn
The Blood-Biomaterials Interface
J. Hubbell
P. C. Johnson, R. Colman
Particulates, Porosity and Biocompatibility
A. Von Recum
L. Cima, S. Goldring, D. Mooney
The Tissue-Biomaterials Interface and Tissue Engineering
A. S. Hoffman
H. Greisler, G. Gross
The Bacteria-Biomaterials Interface
S. I. Cooper
J. Bryers, L. Hazlett, R. Dickinson
Recognition and Biospecific Materials
M. Jozefowicz
I. Chaiken, A. Campbell

Bioenergetics

Proctor Academy
Andover, NH

R. Fillingame, chair
S. Ferguson-Miller, vice chair

2 July — 7 July

Structure F_1 ATPase
A. Senior
M. Amzel, J. Walker
Round Table Discussion: *Implications of F_1 Structure*
W. Allison, R. Capaldi, R. Cross, M. Futai, P. Pedersen
Proton and Water Channels
W. Junge
T. DeCoursey, A. Driessen, M. Forgac, A. Verkman
ReDox Coupled Proton Translocation
M. Wikstrom
R. Gennis, M. Saraste, Y. Woodruff
H+ and Electron Transfer in High Resolution Structures
W. Cramer
H. Michel, J. Smith, J. Wand
Concurrent Specialist Workshops: Mitochondrial Biology, Aging, and Disease
J. Aprille
A. Linnane, D. Rand, R. Sohal, J. Turrens
Comparative Use of Na+ and H+ as Coupling Ions
T. Krulwich
P. Dimroth, Y. Kakinuma, E. Padan, T. Unemoto, T. Wilson
Lac Permease
H. R. Kaback
Diversity of Coupling in H+ Transporting Systems
C. Slayman
D. Blair, Y. Lanyi, M. Yoshida

Biological Regulatory Mechanisms

Holderness School
Plymouth, NH

J. Greenblatt and R. Lehmann, co-chairs

18 June — 23 June

Transcription I – Regulation of Initiation
R. Ebright
A. Hochschild, R. Gourse, R. Tjian, K. Struhl
Chromosomal Segregation/Dosage Compensation
B. Meyer
R. S. Hawley, D. Koshland
Transcription II – Regulation of Elongation
J. Roberts
A. Goldfarb, J. Greenblatt, D. Reinberg, D. Bentley
Dormancy, Death and Life Span
C. Kenyon
M. Hengartner, L. Guarente, P. Setlow
Signalling
S. Burden
N. Perrimon, A. Grossman, R. Firtel
Surveillance and Checkpoints
S. Lindquist
P. O'Farrell, T. Jack
Cell Polarity
R. Losick
J. Chant, J. Gober, J. Culotti, R. Lehmann
Host-Pathogen Interactions
J. Theriot
R. Isberg, J. McCuscer
Genetics of Behavior
R. Axel
T. Tulley, M. Rosbach, P. Sassone-Corsi

Biological Structure and Gene Expression

Salve Regina University
Newport, RI

D. Ingber, chair
B. Geiger, vice chair

11 June — 16 June

Integration of Cell Structure and Function
R. Singer
D. Ingber, J. Lawrence, D. L. Taylor, R. Van Driel
Nuclear Architecture and Growth Control
A. Belmont
R. Berezney, P. Hozak, C. Hutchinson, M. Snyder
Higher Order Control of Gene Transcription
D. Spector
J. Bode, T. Kohwi-Shigematsu, N. Resnick, G. Stein
Nuclear-Cytoplasmic Integration
J. Nickerson
L. Davis, T. Hazelrigg, P. Traub
Functional Regulation by the Cytoskeleton
A. Ben Ze'ev
M. Driscoll, P. Janmey, R. Rasenick, D. St. Johnston
Cell Shape and Gene Expression
S. Farmer

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

F. Colotta, C. Martin, Z. Werb
Cell Architecture and Signal Transduction
B. Geiger
R. Assoian, P. Doherty, J. Nelson, K. Yamada
From Nuclear Matrix to Extracellular Matrix
D. Coffey
M. Bissell
Development of Biological Pattern
P. Gunning
W. Fulton, D. Ish-Horowicz, C. Lloyd, W. Theurkauf

Bioorganic Chemistry

Proctor Academy
Andover, NH

M. Pavia and G. Prestwich, co-chairs

18 June — 23 June

R. Aebersold, C. Burrows, B. Chait, J. Chmeilewski, J. Frost, S. Gellman, L. Gierasch, R. Ghadiri, M. Greene, C. Hélène, S. Kent, C. Khosla, L. Kiessing, A. Klibanov, E. Kool, P. Lansbury, Jr., M. Navia, S. Regen, N. Seeman, R. Tsien, J. Vederas, T. von Geldern, I. Willner, M. Xu

Bones and Teeth

Kimball Union Academy
Meriden, NH

S.R. Goldring, chair
M.F. Young, vice chair

2 July — 7 July

Osteoclast Differentiation and Regulation
G.R. Mundy
T. Suda, R. Baron, S.C. Manolagas, G.D. Roodman
Cytokines and Growth Factors: Effects On Skeletal Differentiation
S.M. Krane
H.A. Fleisch, D.M. Kingsley
Chondrogenesis and Regulation of Skeletal Patterning
L.J. Sandell
W.B. Upholt, D.R. Eyre
Molecular and Cellular Control of Mineralized Matrix Function
M.F. Young
G. Karsenty, P.G. Robey
Steroid Hormones and Their Receptor; Roles in Mineralized Tissues
J.W. Pike
D.P. McDonnell, D.M. Mangelsdorf, R.T. Turner
Peptide Hormones That Regulate Skeletal Tissues
G.J. Strewler
H.M. Kronenberg, A.E. Broadus
Integrins and Cell-Matrix Interactions in Bone and Cartilage
G.A. Rodan
S.L. Teitelbaum, D.E. Ingber, G.J. Strewler
Zebrafish: Genetic Dissection of Transparent Embryos
M. Fishman
Molecular Genetics of Disorders of Mineralized Tissues
F.H. Glorieux
W.A. Horton, H. Juppner, R. Maas

Calcium Signalling

New England College
Henniker, NH

J. W. Putney, Jr., chair
D. Clapham, vice chair

18 June — 23 June

Molecular Nature of Intracellular Calcium Signalling Receptors
D. Clapham
A. Marks, K. Mikoshiba, T. Südhof
Regulation of Intracellular Calcium Signalling Receptors
R. Irvine
L. Bourgignon, B. Ehrlich, T. Pozzan
Calcium Oscillations and Waves – Spatial Aspects
M. Berridge
J. Lechleiter. I. Parker, A. Thomas
Calcium Oscillations and Waves – Signalling Aspects
R. Tsien
A. Galione, O. Petersen,
Regulation of Calcium Entry – Electrophysiology
D. Gill
P. Gardner, R. Lewis, R. Penner
Regulation of Calcium Entry – Molecular Aspects
A. Thomas
L. Birnbaumer, D. Clapham, M. Villereal
Regulation of Calcium Entry - Novel Signals
O. Petersen
J. Garcia-Sancho, M. Hanley, S. Muallem
Plenary Lecture
R. Tsien
Ca^{2+} Signals and Apoptosis
J. Putney
C. Distelhorst, J. Isaacs, S. Orrenius

Cancer

Salve Regina University
Newport, RI

J. Wang, chair
F. Rauscher, vice chair

6 August — 11 August

Cell Cycle Activators
T. Hunter
Steve Reed, Yossi Schlessinger, J. Wang
Cell Cycle Inhibitors
J. Massague
D. Beach, O. Pereira-Smith
Growth Suppressors
C. Prives
J. Campisi, E. Harlow, F. Rauscher
Matrix and Cytoskeleton
M. Bissell
L. Bo Chen, P. Polakis
Animal Models
T. Van Dyke
T. Jacks, E. Y.-H. P. Lee, A. Moser
New Targets
R. Sager
J. Gray, R. Wiseman
Genome Integrity
T. Tlsty
C. Greider, M. Kastan, R. Kolodner
Overviews
L.Hartwell, F. McCormick
Drug Design
T. Gilmer
A. Oliff, K. Scanlon

Carbohydrates

Tilton School
Tilton, NH

O. Hindsgaul, chair
B. M. Pinto, vice chair

25 June — 30 June

Oligosaccharide Synthesis
B. Fraser-Reid and T. Ogawa
S. Danishefsky, S. Hanessian, A. Hasegawa, Y. Ito, D. Kahne, S. Nishimura, R. Schmidt, J. H. van Boom, A. Vasella, C.-H. Wong
Carbohydrate Mimics
K. Bock
B. Ernst, H. Hashimoto, S. Knapp, G. Magnusson, P. Sinaÿ
Glycopeptides
B. Ernst
B. Imperiali, M. Meldal, H. Paulsen, R. Holt
Molecular Recognition of Oligosaccharides
R. U. Lemieux
D. R. Bundle, J. Scott, E. Toone

Catalysis

Colby-Sawyer College (N)
New London, New Hampshire

H. H. Kung, chair
R. Madon, vice chair

25 June — 30 June

Selective Oxidation
J-E. Bäckvall, L. Schmidt, J. C. Volta
NO_x Reduction
R. J. Farrauto, W. K. Hall
Specialty Chemicals and New Catalytic Materials
A. Baiker, D. G. Blackmond, J. Miller, L. Thompson, J. Vartuli
Solid Acid Catalysts
J. Dwyer, J. Lee, W. M. H. Sachtler, S. Soled

Catecholamines

Il Ciocco (Site 2)
Barga, Italy (Tuscany)

Ian Creese, chair;
N. Zahniser, vice chair

7 May — 12 May

"New Directions in Schizophrenia Research" A. Carlsson
Adrenoreceptors
S. Langer
Catecholamine Receptors: Structure/Function
M. Caron
B. Kobilka, G. Milligan, A. Strosberg
Dopamine Receptor Subtype Function
P. Sokoloff, H. Van Tol
Transgenic/Antisense Knockouts
I. Creese
E. Borrelli, D. Sibley
Catecholamine Transporters
G. Uhl
B. Hoffman, R. Innis
Neuromodulatory Actions of Dopamine
J. Surmeier
P. Calabresi, S. Hyman
Dopamine Regulation of GABA Neurons
M.-F. Chesselet
M.-J. Besson, J. Walters
Regulation of Neurotransmitter Release
N. Zahniser
E. Abercrombie
Neurotoxicity: ALS, Alzheimer's and Parkinson's Diseases
M. Zigmond
E. Hirsch
Depression
G. Di Chiara
P. Willner
Drug Abuse: Basic and Clinical Studies
Y. Hurd
P. Kalivas, N. Volkow

Cell Contact and Adhesion

Proctor Academy
Andover, NH

M. Hemler, chair
U. Rutishauser, vice chair

11 June — 16 June

Neural Adhesion Mechanisms
L. Reichardt
H. Cremer, C. Li
Genetic Approaches
C. Buck
M. Labow, S. Zusman
G-proteins and Adhesion
M. Schwartz
J. Daniel, C. Williams
Cadherins
Barry Gumbiner
M. Brenner, W. J. Nelson
Other Adhesion Activities
U. Rutishauser
S. Abelda, A. Dantzig
Ig-Like Adhesion Molecules
P. Doherty
P. Maness-Tidwell, C. Siu, C. Stanners
Adhesion through Carbohydrates
L. Lasky
T. Mayadas-Norton, D. Vestweber
Adhesion Receptors and Cancer
W. Birchmeier
J. Boyd, E. Fearon, P. Polakis
Signalling through Integrins
C. Damsky
S. LaFlamme, J. Madri

Cell Death

Colby-Sawyer College (N)
New London, NH

R. Lockshin, chair

2 July — 7 July

Introduction
R. Lockshin
TBA
Development and Genetics of Cell Death I
H. R. Horvitz
H. Steller, TBA
Development and Genetics of Cell Death II
Z. Zakeri
P. Donahoe, J. Tata
CNS: Extracellular Controls
R. Oppenheim

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

M. Chalfie, N. Robakin, J.Truman
CNS: Growth Factor Signalling
A. Tokolsky
D. Green, TBA
Regulation of Cell Death
A. Wyllie
D. Bredesen,TBA
Intracellular Controls and Metabolic Signalling
M. Tenniswood
P. Davies, E. Johnson, J. Tilley
Extracellular Controls: Immune System
B.Osborne
A. Greenberg, S. Nagata, TBA
Cell Death-Based Therapies
L. D. Tomei
Presentations from three groups actively involved in developing cell death-based therapies

Cell Proliferation, Molecular and Genetic Basis of

Kimball Union Academy
Meriden, NH

R. Eisenman, chair
J. Blenis, vice chair

9 July — 14 July

Signal Transduction I
J. Blenis
J. Cooper, S. Courtneidge, C. Marshall
Signal Transduction II
B. Neel
J. Ihle, N. Tonks, M. F. White
Cell Cycle I
C. Sherr
N. Dyson, TBA
Cell Cycle II
J. Nevins
M. J. Farnham, H. Piwnica-Worms, A. Murray
Oncogenes and Cancer
I. Verma
J. Folkman, O. Witte
Growth Suppressors and Cell Death
J. Massague
T. Jacks, L. Lau, TBA
Extracellular Matrix and Cytoskeletal Architecture
E. Fuchs
T. Parsons, TBA
Differentiation and Development
L. Gudas
D. Kaplan, E. N. Olson, P. Soriano

Chemical Oceanography

New England College
Henniker, NH

George Luther, III, chair
Kenneth Bruland, vice chair

11 June — 16 June

Understanding Global Change through Marine Chemistry

Biogeochemistry of Trace Element Uptake
W. Sunda, J. Moffett, D. Hutchins
Chemical Aspects of Trace Element Uptake
A. Butler, A. Crumbliss
Cycling and Fluxes of Organic C, Fe, and Mn in Sediments
G. De Lange, B. Sundby, D. Burdige
Microbial Processes in Sediments
B. Thamdrup, K. Nealson
Chemical Tracers for Primary Production and Export
K. Buesseler, K. Falkner, T. Pederson
Hydrothermal Vent Dynamics
K. Vondamm, F. Sansone
Atmospheric-Ocean Transfer of CO_2
R. Byrne, R. Toggweiler, P. Tans
Upper Ocean Dynamics at the Time Series Locations
A. Michaels, D. Karl
Organic Carbon
J. Sharp, A. McNichol, R. Keil

Chemotherapy of Experimental and Clinical Cancer

Colby-Sawyer College (S)
New London, NH

R.C. Jackson, chair
J.A. Hickman, vice chair

16 July — 21 July

Basic Research on Colon Carcinoma
A.L. Jackman
P.V. Danenberg, E.R. Fearon, G.D. Luk
New Drugs for Colon Carcinoma
J.R. Bertino
N.J. Clendeninn, G. Kenneally, L. Saltz
New Agents in Development
S.H. Kaufmann
J.J. Catino, R.B. Diasio, E.A. Sausville
Clinical Results with High-Dose Therapy
O.M. Colvin
A.D. Ho, W.P. Peters
Proteases as Therapeutic Targets
A.K. Larsen
P.D. Brown, B.F. Sloane, N.A. Thornberry
Poster Discussion Session
T.R. Tritton
New Approaches to Discovery of Drug Leads
R.C. Jackson
L. Gold, L. Kauvar, P. Senter
Debate: *Modulator Agents will Contribute More To Improving Cancer Treatment than New Drugs*
G.P. Studzinski
K.R. Harrap, J.A. Hickman, D.S. Martin, B.I. Sikic
New Targets for Drug Discovery
M.M. Cornwell
M. Blasco, G.F. Draetta, V. Zakian

Chronobiology

Il Ciocco (Site 2)
Barga, Italy (Tuscany)

S. Daan, chair
G.D. Block, vice chair

30 April — 5 May

Human Circadian Rhythms
E. van Cauter
J. Aschoff, D.G.M. Beersma, K. Honma, S. Honma
Season and Melatonin
J. Arendt
H. Illnerova, S.M. Reppert, A. Wirz-Justice
Circadian Rhythms in Behavior: Functional Approaches
N. Mrosovsky
R. Mistlberger, T. Ruf, I. Tobler
Circadian Rhythms in Behavior: Pacemaking Systems
B. Rusak
W. Puchalski
Circadian Photoreception
M. Menaker
J. Falcon, R. Foster, M. Pierce
Physiology of Pacemaking Neurons
G.D. Block
F.E. Dudek, D. Welsh
W. Schwartz, commentator
Molecular Approaches: Animals
J. Loros
P. Hardin, M. Hotz Vitaterna, P. Sassone-Corsi
Molecular Approaches: Bacteria and Plants
T. Roenneberg
C. Johnson, B. Piechulla
J. Takahashi, commentator
Circannual Rhythms and Photoperiodism
E. Gwinner
A. Foa, F. Karsch, A. Loudon

Coastal Ocean Circulation

Plymouth State College (N)
Plymouth, NH

L. Cifuentes, chair
R. Coffin, vice chair

18 June — 23 June

Allochthonous and Autochthonous N-C Coupling
R. Coffin
To Be Named, R. Dennis
Water Column & Benthic N-C Coupling
R. Benner
D. Kirchman, C. Lee
River-Groundwater N Inputs & Processes
J. Chanton
R. Kyle, S. Seitzinger, B. Burnett
Rainwater N Inputs & Processes
H. Paerl
H. Jeffries, H. Paerl
Characterization & Organic Matter Degradation
C. Hopkinson
M. Perdue, J. Valino, A. Giblin
N-C Coupling in Tropical Estuaries
R. Twilley
R. Twilley, D. Alongi
N-C Coupling in Temperate Estuaries I
J. Sharp
J. Sharp, S. Smith, M. Kemp
N-C Coupling in Temperate Estuaries II
J. Sharp
W. Gardner, P. Eldridge
Nitrogen Availability & Pollutant Degradation
D. Capone
D. Capone, M. Shiaris, M. Hägbloom

Coatings and Films

New Hampton School
New Hampton, NH

C. E. Hoyle, chair
D. W. Boyd, vice chair

23 July — 28 July

Environmental Compliance
J. Gaynor
J. Berry, F. N. Jones, K. H. van Streun
UV Curable Coatings
A. Scranton
A. F. Jacobine, J. V. Crivello
Degradation and Stabilization of Coatings
T. Nguyen
D. B. Bauer, J. A. Simms, G. Bierwagen
Low Energy Surface Coatings and Optically Active Films
T. St. Clair
R. F. Brady, S. Tripathy
Film Formation: Morphology an Microscopy
R. A. Ryntz
D. Meier, D. Kahn, F. Walker
Film Formation: Kinetics and Network Characterization
S. Lapin
L. W. Hill, C. Bowman
High Solids and Powder Coatings
R. Miles
H. Lucas, S. Thames, D. Wicks
Liquid Crystalline Films
S. Jönsson
G. Crawford, P. Shannon
Advanced Curing Methods and Characterization Techniques
D. W. Boyd
T. Provder, J. Stoffer

Collagen

Colby-Sawyer College (S)
New London, NH

L. J. Sandell and K. von der Mark, co-chairs

30 July — 4 August

Extracellular Matrix in Differentiation and Development
G. Martin
R. Faessler, J. Fessler, M. Ginsberg
Collagen Gene Mutations and Tissue Function
D. Prockop
J. Kramer, J. Uitto
Modular Structure of Matrix Proteins
M. van der Rest
P. Bornstein, H. Erickson, N. Morris
Structure and Regulation of Collagen Genes
B. Smith
Y. Yamada, F. Ramirez
Tissue Specific Expression
S. Adams
B. de Crombrugghe, A. Krainer, B. Kream
Skeletal Development
B. Olsen
R. Balling, F. Luyten
Matrix Assembly and Remodeling
E. Hay
D. Mosher, W. Stetler-Stevenson, C. Streuli
Autoimmune Diseases
S. Krane
R. Holmdahl, B. Hudson, K. Tryggvason

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Complex Fluids

Colby-Sawyer College (N)
New London, NH

W. M. Gelbart, chair
E. Sackmann, vice chair

13 August — 18 August

Novel Polymer Properties
A. R. Khoklov, T. A. Whitten
Biomembranes
D. Andelman, R. Bruinsma
DNA Solutions
S. Fraden, D. R. Nelson, H. Strey
Block Copolymers
F. S. Bates, Z.-G. Wang
Defects in Micellar Solutions
A. Ben-Shaul, S. Gruner, G. Porte
Nanocrystal Dispersions
P. Eisenberger, J. R. Heath, R. L. Whetten
Vesicles
E. Evans, R. Lipowsky

Condensed Matter Physics

Brewster Academy
Wolfeboro, NH

S. N. Coppersmith and S. R. Nagel, co-chairs
G. A. Thomas, vice chair

9 July — 14 July

Perspectives on Nonequilibrium Systems
P. Hohenberg
P. W. Anderson
Glassy Phases in Other Systems
B. Golding
N. Birge, C. Lieber, D. Weitz
Plasticity in Flux Lattices
V. Vinokur
S. Bhattacharya, C. Marchetti, A. Tonomura
Plasticity and Crack Propagation
C. Tang
J. Carlson
Noise and Avalanches in Flux Lattices
S. Field
G. Blatter, W. Kwok, T. Rosenbaum
Noise and Avalanches in Other Systems
A. Mehta
J. Clarke, M. Weissman
Patterns and Interfaces in Flux Lattices
P. Kes
A. Dorsey, C. Duran, E. M. Forgan
Patterns and Interfaces in Other Systems
M. Jensen
R. Goldstein, M. Goulian
New Frontiers
D. Nelson
P. Chaidkin, L. Kadanoff, A. Libchaber

Corrosion - Dry

Colby-Sawyer College (N)
New London, NH

F. H. Stott, chair
W. H. Smyrl, vice chair

16 July — 21 July

Corrosion Aspects of Solid Oxide Fuel Cells
P. Hou
P. Kofstad, W. J. Quadakkers
Catastrophic Corrosion at Intermediate Temperatures
M. J. Bennett
W. T. Bakker, H. J. Grabke
Stress Effects in Oxidation
M. F. Stroosnijder
M. Schutze, P. F. Tortorelli
Integrity of the Scale-Metal Interface
G. C. Wood
R. M. Cannon, H. E. Evans
Thermal Barrier Coatings: Applications
N. Bornstein
W. P. Allen, H. L. Bernstein, V. Himonshu
Thermal Barrier Coatings: Degradation Resistance
W. P. Allen
R. L. Jones, R. Sisson
Oxidation of Multiphase Alloys
G. Beranger
B. Gleeson, J. C. Schaeffer
Design of Laboratory Experiments for Industrial Applications
Panel: R. John, K. Luthra, J. R. Nicholls, R. A. Perkins
Contrasting Aspects of Silica-Forming Materials
R. Hussey
H. Z. Massoud, E. J. Opila

Developmental Biology

Proctor Academy
Andover, NH

S. Fraser and C. Kenyon, co-chairs

25 June — 30 June

Cellular Basis of Morphogenesis
E. Wieschaus
R. Keller, M. Kirschner, A. Spradling
Signalling and Developmental Patterning
N. Perrimon
J. Kimble, G. Rubin, G. Crabtree
Specification of Cell Fate
D. Anderson
J. Eisen, A. Johnson, K. Barton, D. Littman, E. Olson
Developmental Gene Regulation
M. Levine
E. Davidson, B. Meyer, M. Scott
Embryonic Organizers and Axes
R. Lehmann
D. Melton, D. Kimelman, J. Priess, C. Stern
Embryonic Fields and Pattern Formation
G. Struhl
M. Bronner-Fraser, R. Krumlauf, A. McMahon, M. Shankland
Elaboration of Pattern and Organogenesis
S. Carroll
C. Nüsslein-Volhard, C. Tabin
Polarity
L. Shapiro
I. Herskowitz, J. Chant, Y.N. Jan, M. Tessier-Lavigne

Drug Metabolism

Holderness School
Plymouth, NH

D. Dulik, chair
T. Monks, vice chair

9 July — 14 July

Consequences of Covalent Bonding I: Protein Targets
A. Cribb
U. Boelsterli, K. Park, J. Stevens
Consequences of Covalent Bonding II: DNA Targets
J. DiGiovanni
J. DiGiovanni, F. Kadlubar
Recent Advances in Structure, Function, and Regulation of Key Phase I Oxidative Enzymes
J. Halpert
E. Johnson, B. S. Masters, R. Philpot
Human Cytosolic Sulfotransferases: Biochemistry, Molecular Biology and Role in Bioactivation
C. Falani
H. Glatt, R. Weinshilboum
Role of Drug Metabolism and Pharmacokinetics in Optimizing Drug Candidate Selection
L. Klunk
S. Crooke, J. Denissen, F. Lee
Product Approvals in the Animal Health Industry: Satisfaction of Human Food Safety Requirements
D. Gottschall
R. Clement, D. Gottschall
Role of Drug Metabolism in Cancer Chemotherapy and Acquired Drug Resistance
T. Ishikawa
R. Deeley, T. Hamilton, C. R. Wolf
Keynote Address
L. Marnett
Recent Advances in Pulmonary Biotransformation
T. Monks
J. Bolton, A. Buckpitt, G. Yost

Dynamics at Surfaces

Proctor Academy
Andover, NH

R. Cavanagh, chair
C. Rettner, vice chair

6 August — 11 August

Metal Growth
A. Zangwill
J. Evans, G. Comsa
Semiconductor Growth
J. Hinch
H. Metiu, B. Orr
Adlayer Dynamics
J.W. Gadzuk
P. Weiss, X. Xie, M. Salmeron
Silicon Etching
L. DeLouise
A. Kummel, J. Weaver
Hydrogen/Si
T. Heinz
K. Kolasinski, M. Scheffler
State-Selective/Reactive Scattering
J. Tully
B. Jackson, D. Jacobs, G. Sitz
Non-Thermal Desorption
J. Misewich
Y. Matsumoto, S.Y. Li
Non-Linear Optical Probes
J. Hicks
R. Corn, A. Yodh, R.J.D. Miller

Elastin and Elastic Fibers

Kimball Union Academy
Meriden, NH

C. Boyd, chair
W. C. Parks, vice chair

23 July — 28 July

Elastin Structure
F. W. Keeley
The Structure of Microfibrils and Elastic fibers
R. P. Mecham
Elastic Fibers - Structural Lessons from New Tissues
L. B. Sandberg
Lysyl Oxidase
H. M. Kagan
The Synthesis of Elastin and Microfibrillar Proteins
W. C. Parks
Elastin and Elastic Fiber Turnover
Robert M. Senior
The Pathobiology of Elastic Tissue
M. Rabinovitch
The Marfan Syndrome
L. Peltonen
Supravalvular Aortic Stenosis
C. D. Boyd

Elastomers

Colby-Sawyer College (N)
New London, NH

R. Quirk, chair
A. Halasa, vice chair

23 July — 28 July

E. J. Amia, J. G. Curro, M. K. Georges, J. M. Gossline, G. Ha-med, G. Heinrich, A. S. Hoffman, F. Ignatz-Hoover, J. P. Kenedy, J. A. Kornfield, R. Langer, I. Manners, I. Manus-Zloczower, M. Müller, D. Richter, R. F. T. Stepto, P. Teyssle, E. von Meerwall, W. H. Waddell, R. M. Waymouth

Electron Distribution and Chemical Bonding

Plymouth State College (N)
Plymouth, NH

J. W. Downs, chair
J. P. Ritchie, vice chair

2 July — 7 July

Theoretical Description and Interpretation of Electron Densities
R. Glaser
A. Stone, J. Cioslowski, C. Gatti
Electrostatic Properties by Electron Diffraction
J. Spence
M. O'Keeffe, A. Fox
The Maximum Entropy Method
D. Feil
G. Bricogne, R. Devries, M. Takata
Poster Session: Experimental and Theoretical Charge Density Distributions
C. Ewig
Chemistry from Structure Factors
J. Downs
B. Craven, S. Howard, M. Spackman
Novel Experiments
L. Brammer
C. Lecomte, M. Pressprich, H. Graafsma
Charge Distributions in Simulations, Models, and Correlations

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

J. Ritchie
J. Gao, S. Price, P. Politzer
Trends in Contemporary Electron Density Analysis
R. Blessing
T. Koritzansky, R. Bader
Density Functionals and the Shapes of Molecular Systems
H. King
M. Levy, D. Salahub, P. Mezey

Electronic Materials, Chemistry of

Proctor Academy
Andover, NH

M. E. Gross, chair
H. P. Gillis, vice chair

30 July — 4 August

M. Cohen, V. Donnelly, W. Glad-felter. D. Graves, P. Ho, B. Kee, R. Sievers, A. Vecht, D. Weitekamp
Others TBA

Enzymes, Coenzymes and Metabolic Pathways

Kimball Union Academy
Meriden, NH

D. N. Silverman and V. E. Anderson, co-chairs
D. E. Cane and M. E. Marletta, co-vice chairs

16 July — 21 July

Unnatural Amino Acids
S. B. Kent, P. G. Schultz
Coenzymes
C. Thorpe
R. W. Matthews, M. T. Stankovich, M. W. Washabaugh
Kinases and Phosphatases
R. E. Viola
E. R. Kantrovich, D. L. Purich, G. H. Reed, M.-D. Tsai
Enzyme Mechanisms I
S. Lindskog
D. W. Christianson, R. B. Silverman
Instrumental Methods
R. C. Hille
P. R. Carey, H. E. Gaub, A. E. McDermott, R. D. Smith
Isotope Effects and Transition States
B. A. Horenstein
B. V. Plapp, I. A. Rose, V. L. Schramm
Enzyme Mechanisms II
C. A. Fierke
M. H. Gelb, L. C. Kurz, J. C. Sacchettini, D. V. Santi
Enzyme Sages
G. L. Kenyon, J. A. Wells
Inhibitor Design
P. A. Bash
C. A. Kettner, P. A. Kollman

Epigenetics

Holderness School
Plymouth, NH

V. Chandler and T. Bestor,co-chairs

13 August — 18 August

Gene Silencing
E. Selker
S. Henikoff, J.-L. Rossignol, E. Signer
R. Flavell
W. Dougherty
M. Matzke
J. R. Chaillet, C. Emerson, D. Kohn
Epigenetic Effects in Development
S. Henikoff
W. Bender, R. Paro, B. Wakimoto
N. Fedoroff
Vi. Chandler, K. Cone, E. Li
Genomic Imprinting and X Inactivation
D. Solter
D. Barlow, C. Laird, M. Lyon, C. Stewart, S. Tilghman,
Heritable Chromatin States
J. Rine
T. Bestor, A. Efstratiadis, J. Finneran, A. Klar, A. Wolffe

Epitaxial Thin Films and Interfaces

Plymouth State College (S)
Plymouth, NH

J. M. Gibson, chair
J. A. Venables, vice chair

9 July — 14 July

Semiconductor Epitaxy
D. Biegelsen
A. Cullis, D. Vvedensky, S. Yalisove
Epitaxy of Non-Semiconductors
M. Olmstead
B. Heinrich, D. Loretto
Nucleation of Thin Films
J. Evans
G. S. Bales, J. Behm, K. Jacobsen
Defects and Dislocations in Thin Film
D. Cherns, F. LeGoues
P. Mooney, D. Perovic
Diffusion and Segregation in Epitaxial Films
H. Gossmann
T. Chiang, D. Godbey, F. Spaepen
Electrical Properties of Epitaxial Films
L. Showalter
H. V. Kanel, K. Nakagawa
From Monolayers to Multilayers
B. Orr
M. Bartelt, E. Chason, K. Kern
Islands in III-V Heteroepitaxy
R. Hull, M. Henzler
A. Madhukar, G. Ribiero, M. Yoo

Epithelial Differentiation and Keratinization

Tilton School
Tilton, NH

T.-T. Sun, chair
D. Roop, vice chair

16 July — 21 July

Epithelial Cell Adhesion
F. Watt
W. Franke, J. Nelson, S. Tsukita, J. Uitto
Signalling
J. Schlessinger
A. Dlugosz, R. Derynck, J. Schlessinger
Epithelial Differentiation
B. Dale
P. Steinert, P. Elias, E. Fuchs
Tumorigenesis
W. Francke
A. Balmain, D. Roop
Hair Follicle Formation
R. Lavker
C. Jahoda, G. Martin
Epithelial and Viral Growth
H. Green
D. Lee, L. Chow, J. Voorhees
Issues Rising
Two evening sessions consisting of a series of 15 min. talks on subjects that are not covered by the main talks, to be selected from abstracts submitted before April 15, 1995. Submit abstracts to:Dennis Roop, Dept. of Cell Biology, Baylor College of Medicine, Houston, TX, 77030; TEL 713-798-3743, FAX 713-790-0545

Fertilization and Activation of Development

Holderness School
Plymouth, NH

G. S. Kopf, chair
R. Nuccitelli, vice chair

30 July — 4 August

Evolution and Function of Chemosensory Signal Transduction in Gametes
H.M. Florman
M. Parmentier, R. Reed, I. Weyand
Gamete Recognition Molecules
R. Cardullo
J. D. Bleil, J. Dean, OPEN
Early Events of Egg Activation
K. Foltz
D. Kline, H. C. Lee, K. Mikoshiba
Sperm-Egg Plasma Membrane Interactions
D. Myles
C. Blobel, J. White
Insights into Fertilization and Activation of Development from Studies in Other Systems
R. Nuccitelli
R. M. Perlmutter, R. Scheller,OPEN
Fertilization in Plants
D. Preuss
H. Dickinson, C. Dumas
Coordination of Early and Late Events of Egg Activation
R.M. Schultz
J. Maller, D. Poccia, J.D. Richter

Keynote Address
P. Primakoff
R. M. Green
Hot Topics and Contributed Papers
L. A. Jaffe

Fiber Science

Colby-Sawyer College (N)
New London, NH

H.A. Davis, chair
S. Kavesh, vice chair

9 July — 14 July

Fundamentals of High Performance Fibers
S. Kavesh
R.C. Armstrong, M. Matsuo, W. Knoff
Properties and Use of High Performance Fibers
J. Ward
D. Prevorsek, P. Cunniff
Breakthrough Technology for Studying Fibers by X-ray Scattering and Diffraction
R. Barton
Y. Fu, S. Murthy, N. Stribeck
Structure and Property Understanding of Textile Fibers
D. Bosley
R. Miller, D. Brown
Textile Processing Technologies as Low-cost Routes to High Value Composites
C. Pastore
N. Pan, J. Jaranson, B. Soebroto
Science of Fiber and Yarn Processing
S. Batra
B. Fraser, T. Ghosh
Fibers/textiles and the Environment
J. Schwartz
R. Evans, T. Jenczewski, R. Castle, C. Pyle
The Role of Computers and Information Science in Your Future
D. Pensak (Thursday Evening Speaker)
Practical Aspects and Science of Fabric Appearance
M. Sullivan
R. McGregor, T. Kikutan

Forested Catchments, Hydrological, Geochemical and Biological Processes in

Colby-Sawyer College (S)
New London, NH

H. Hemond, chair
J. Mulder, vice chair

13 August — 18 August

Hydrology Forested Catchments
K. Bencala
C. Kendall, J. McDonnell, J. Tenhunen
Controls of Major Ion Chemistry
E. Matzner
A. Blum, M. Firestone, D. Van Dam, M. VanNoordwijk
Field Trip to Sleepers River
J. Shanley
O. Iverfeldt
Carbon Cycling in Forested Catchments
N. Van Breemen
J. Aber, I. Koegel-Knabner, K. Nadelhoffer, D. Schimel
Future Directions in Catchment Science
C. Dahm
L. Bruynzeel, S. Norton, S. Running

Free Radical Reactions

Holderness School
Plymouth, NH

S. Nelsen, chair
J. Lusztyk, vice chair

16 July — 21 July

Dynamics I
K. Ingold
T. Clark, J. Jackson, J. Scaiano
Dynamics II
H. Iwamura
N. Turro
Dynamics III
D. Tanner
S. Blackstock, J. Daub, F. Williams

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

DNA Cleavage
M. Greenberg
B. Giese
Synthetic Reactions I
X. Jiang
A. Citterio, C. Merlic, I. Ryu
Enzymatic Reactions I
M. Newcomb
J. Stubbe
Synthetic Reactions II
N. Porter
P. Dowd, S. Kim
Dynamics IV
J. Tanko
J.-M. Savéant
Enzymatic Reactions II
J. McBride
P. Frey, J. Knappe

Genetic Toxicology

Colby-Sawyer College (S)
New London, NH

J. Preston, chair
K. Tindall, vice chair

11 June — 16 June

DNA Replication and Mutagenesis
M. Goodman
DNA Repair Errors
L. Samson
Mechanisms for Specificity of Chromosome Aberration Formation
W. Morgan
Non-Genotoxic Processes of Cancer Cell Replication
J. C. Barrett
Tumor Suppressor Genes - Oncogenes and Sensitivity to Mutagenesis
R. Tennant
Specificity of Mutation Induction
T. Skopek
Cell Cycle Controls/Checkpoints and Mutation
W. Kaufman
Risk Assessment Models
R. Conolly

Gravitational Effects in Physico-chemical Systems

New England College
Henniker, NH

J. I. Alexander, chair
C. F. Chen, vice chair

9 July — 14 July

Growth Morphologies, Transport and Solidification in Low Gravity
R.-F. Sekerka and J.-J. Favier
R. Abbaschian, R. German, M. Glicksman
Measurement of Transport Properties: Nucleation Studies in Containerless Melts
I. Egry, R. Bayusick, and M. Wargo
D. Lee, J. Szekely
Control or Elimination of Convective Effects
D. Larson and A. Chait
G. Müller, G. Neitzel, F. Szofran
Fundamental Physics: Critical Phenomena
R. Gammon and A. Wilkinson
D. Beysens, R. Ferrell
Interfacial Phenomena
M. Weislogel and J. Koster
R. Davis, S. Garoff, J. C. Legros
Stability of Liquid Surfaces
J. Meseguer and S. Coriell
G. McKinley, P. Steen
Combustion Processes and Flamefronts
J. Saltzmann, H. Ross, P. Ronney
J. D. Buckmaster, R. Cheng, H. Pearlman
Low Gravity Fluid Flows
M. K. Smith
G. Homsy, H. Kuhlmann
Transport, Colloids and Crystallization Processes
J. Baygents and F. Rosenberger
J. Anderson, A. MacPherson, C. Zukowski

Heterocyclic Compounds

New Hampton School
New Hampton, NH

J. Aube, chair
P. Reider, vice-chair

9 July — 14 July

Speakers:
V. K. Aggarwal, J.-E. Backvall, C. Barnett, S. Danishefsky, H. Davies, J. Ellman, M. Ennis, T. Fukuyama, R. E. Gawley, G. Georg, E. Jacobsen, L. L. Kiessling, M. Lautens, Y. Ohfune, J. Panek, W. Pearson, V. Rawal, C.W. Rees, C. H. Senanayake, A. B. Smith, J. Stafford, P. Wipf, S. Zard

High Performance Computing and Information Infrastructure

Plymouth State College (S)
Plymouth, NH

D. Reed, chair
A. Skjellum, vice chair

16 July — 21 July

Network and Processor Technology: Evolution or Revolution?
Speakers TBA
Exploiting the Information Superhighway
C. Catlett
High Performance Input/Output
J. Saltz
B. Gropp, Others
Virtual Reality and High Performance Computing
R.Stevens, Others
The Future of Languages and Compilers for High Performance Computing
I. Foster, D. Gannon, Other
The Future of Libraries and Reusable Software
J. Dongarra, A. Skjellum
Performance/Algorithm Visualization Tools
E. Lusk, B. Miller, D. Reed
Milestones, Economics, and Technology
A. Geist
J. McGraw, J. Saltz, Other

Hormonal Carcinogenesis

Colby-Sawyer College (S)
New London, NH

G. R. Cunha, chair
G. Lucier, vice chair

6 August —11 August

Steroid Receptors
E. Wilson
E. Barrack, B. Katzenellenbogen, S Fuqua
Molecular Genetics
D. Tindall
W. Isaacs, B. Weber
Hormones As Postitive And Negative Regulators Of Normal And Abnormal Growth
M. Tenniswood
R. Walker, T. Iguchi, B. Vonderhaar
Genetic Versus Epigenetic Mechanisms Of Hormonal Carcinogenesis
J. Liehr
E. Cavalieri, H. Rubin
Hormonally Active Environmental Substances
G. Lucier
S. Safe, A. Soto, P. Whitten
Tissue And Cellular Interactions In Carcinogenesis
S. Haslam
L. Chung, P. Basset
Growth Factors In Carcinogenesis
T. Thompson
H. Moses, D. Peehl, A. Harris
Hormonal Carcinogenesis: A Historical Perspective
G. R. Cunha
P. Siiteri
New Frontiers In Carcinogenesis Of Hormone Target Organs
S.-M. Ho
K . Korach, G. Cunha, N. Greenberg,

Hormone Action

Kimball Union Academy
Meriden, NH

P.L. Mellon, chair;
J. Drouin, vice chair

30 July — 4 August

Signal Transduction and Transcription
R. Treisman
Nuclear Receptors
J.-A. Gustafsson, B. W. O'Malley, W. Wahli, E.M. Wilson
Signal Transduction by TGFbeta
R. Derynck, W.M. Gelbart, J. Massague
Regulation of Endocrine Gene Expression
J. Drouin
H.A. Ingraham, M. Nemer, K.L. Parker
Ras Signaling Cascade
J. Avruch, C.R. Kahn, P.W. Sternberg
Phosphorylation and Signaling
M.Z. Gilman
R.H. Goodman, G.S. McKnight, R. Prywes
Membrane Receptor Function
E. Borrelli, E.M. Brown, K.E. Mayo
Steroid and Retinoid Receptors
R. Evan
L.J. Gudas, D.P. McDonnell, N.L. Weigel
Adrenergic Receptors
R.J. Lefkowitz
Pituitary Development
S.A. Camper, M. Low, K.A. Mahon

Human Molecular Genetics

Salve Regina University
Newport, RI

L.-C. Tsui, chair
R. Nussbaum, vice chair

30 July — 4 August

Disease Gene Analysis
R. Nussbaum
H. Dietz, D. Wallace
Genome Instability
M. Hayden
N. Arnheim, K. Johnson
Genomic Technology
D. Cox
K. Hunter, M. McClelland
Cancer Genetics
F. Collins
S. Friend, D. Goldgar
Gene Identification
R. Kucherlapati
Imprinting and X-inactivation
U. Francke
S. Tilghman, C. Brown
Model Systems
L.-C. Tsui
J. Friedman, J. Dick
Mapping Complex Traits
A. Chakravarti
N. Schork, G. Duyk
Gene Therapy
S. Woo
Y. Wai Kan, J. Wilson, F. Wong-Staal

Hydrogen-Metal Systems

New England College
Henniker, NH

B. Bowman and Y. Fukai, co-chairs
R. Leisure and L. Schlapbach, co-vice chairs

16 July — 21 July

Phase Transformations
J. Cantrell, D. Noreus
K. Aoki, T. B. Flanagan, W. A. Oates
Forum on Current Applications
R. Bowman
D. K. Coates, S. Gottesfeld, P. Dantzer, T. Motyka, L. A. Wade
Hydride Properties of Batteries
A. Percheron-Guegan
B. Fultz, J. McBreen
Hydrogen in Magnetic Materials
P. Vajda
I. R. Harris
Thermal Properties of Hydrides
H. Wipf
E. J. Cotts
Hydrogen Behavior on Surfaces
J. Reilly, L. Schlapbach
G. Jerkiewicz, M. Pruski, S. Suda
Anomalous Behavior of Metal Deuterides
R. Barnes
M. C. H. McKubre
Hydrogen in Novel Materials
A. Maeland, N. Moody
I. O. Bashkin, R. Hettich, K. Yvon
General Interest Lecture
Y. Fukai
W. J. Nellis
Hydrogen Diffusion Behavior
P. Jena, D. Torgeson
R. Cantelli, G. Majer, G. Wahnström

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Inorganic Chemistry

Brewster Academy
Wolfeboro, NH

H. Kaesz, chair
D. Thorn, vice chair

23 July — 28 July

Bio-inorganic Chemistry
P. Legzdins
J. N. Burstyn, S. J. Lippard, M. M. Millar, H. Vahrenkamp
Main Group Elements
T. O. Beachley, Jr.
D. W. Margerum, A. D. Norman, H. W. Roesky
Coordination Compounds and Supramolecular Complexes
S. H. Strauss
B. M. Foxman, C. A. Murillo, C. E. Strouse, K. H. Theopold
Lanthanides and Actinides
D. Clark
C. J. Burns, W. J. Evans, J. Takats
Metal Clusters and Organometallic Chemistry - I
K. H. Whitmire
D. Fenske, G. Lavigne, J.-Y. Saillard, G. Süss-Fink
Metal Clusters and Organometallic Chemistry - II
R. D. Adams
N. J. Cooper, D. F. Shriver, Z. Xue
Inorganic Chemistry of Materials
D. Loy
A. J. Barron, S. L. Issler, J. A. McCleverty, W. S. Rees, Jr.
Governmental Science Policy and Trends in Education
F. A. Cotton
A. P. Sattelberger, L. S. Williams
Industrial Forum
D. Thorn
G. Kubas, A. H. Reid, D. Riley, J. S. Thompson

Ion-Containing Polymers

Colby-Sawyer College (S)
New London, NH

B. Chu, chair
C. Martin, vice chair

9 July — 14 July

E. Amis
Polyions and Block Ionomers in Solution
M. Schmidt, C. Wu
Self-Assembly and Pattern Recognition
M. Muthukumar
R. K. Prud'homme
Electrophoresis and Polyelectrolyte Gel
G. Weill, D. Woermann
R. Farinato
Inorganic Mesophases and Nanocomposites
K. Mauritz, B. F. Chmelka
Ionomer Theory
A. Khokhlov
R. Register
Block Ionomer Surfaces
M. Rafailovich
C. Martin
Poster Session
C. Williams
Ionomer Phase Behavior and Microstructures
J. Noolandi, R. Weiss, Q. Wu
M. Hara
Graph Copolymers and Dendrimers
D. Peiffer, D. A. Tomalia
S. Cooper
Fuel Cells I
K. R. Plowman, R. F. Sarinell, H. L. Yeager
W. J. MacKnight
Architecture and Morphological Diversity
A. Eisenberg
C. Martin
Fuel Cells II
P. Adelbert, D. D. DesMarteau

Laser Diagnostics in Combustion

Plymouth State College (N)
Plymouth, NH

J.-P. Taran, chair
M. Long, vice chair

9 July — 14 July

Fundamental Issues in Fluorescence, Raman and Multiphoton Spectroscopy
R. Farrow
M. Lefebvre, P. Paul, R. Chang
Laboratory Flame Studies in Diagnostics Research
D. Crosley
G. Meijer, K. Smyth
Resonant Wave-Mixing Processes
P. Ewart
R. Lucht, D. Rakestraw, T. Dreier
Environmental Diagnostics
C. Koshland
T. Cool, J. Warnatz
Implementation of Quantitative Imaging in High-Pressure Systems
K. Kohse-Höinghaus
P. Andresen, U. Meier, M. Allen
Chemistry-Turbulence Interaction
R. Dibble
M. Roquemore, A. Masri
Short Pulse Applications, Technical Advances
D. Greenhalgh
M. Linne, T. Raymond, M.-C. Castex
Diagnostics in Practical Combustors
R. Santoro
L. Goss, R. Barlow
Diagnostics in Heterogeneous Environments
M. Alden
N. Tait, F. Grisch, R. Snyder

Lipid Metabolism

Kimball Union Academy
Meriden, New Hampshire

D.R. Voelker, chair;
L.L. Rudel, vice chair

25 June — 30 June

Bacterial Lipid Metabolism
C. O. Rock
J. E. Cronan, C. R. H. Raetz, W. Dowhan, C. O. Rock
Sphingolipids and Signalling
R. N. Kolesnick
S. Spiegel, R. N. Kolesnick, T. M. Dunn
Phosphatidylcholine and Phosphatidylethanolamine
S. Jackowski
C. Kent, S. Jackowski, D. E. Vance, L. M. G. Van Golde
Integration of Lipid Metabolism
G. M. Carman
R. M. Bell, G. M. Carman, M. Nishijima
Lipid Transport
R. E. Pagano
J. Vance, R. E. Pagano, J. W. Nichols, S. Ruetz
Lipid Binding Proteins
J. Storch
M. Umeda, V. Bankaitis, J. Storch
Bioactive Lipids and Derivatives
S. M. Prescott
W. L. Smith, S. M. Prescott, J. W. Thorner, P. W. Majerus
Cholesterol Metabolism
P. A. Edwards
X. Wang, P. A. Edwards
Phospholipases
E. Dennis
S. Cockroft, E. A. Dennis
Lipid Modification of Proteins
J. I. Gordon
P. J. Casey, J. I. Gordon

Liquid Crystals

Brewster Academy
Wolfeboro, NH

J. D. Litster, chair
J. Patel, vice chair

18 June — 23 June

Biological Connections
S. Fraden
H. Gruler, J. Prost, C. Safinya
Defect Phases
P. Crooker
N. Goldenfeld, A. Killian, D. Nelson
Liquid Crystal Films and Interfaces
C-C Huang
P. Heiney, W. de Jeu, L. Sorenson
New Materials and/or Applications
J. Patel
H. Finkelmann, J. H. Wendorff, S. Stupp
Nonequilibrium Behavior
P. Goldbart, E. Sirota
Novel Applications
M. Radcliffe
K. Holdig
Progress on Phase Transitions
A. Aharony, C. Garland

Liquids, Chemistry and Physics of

Holderness School
Plymouth, NH

J. Weeks, chair
J. Jonas, vice chair

6 August — 11 August

Solvation Dynamics
P. Barbara
M. Maroncelli, M. Parrinello, G. Voth
Waves and Cavitation in Liquids
F. Stillinger
S. Balibar, S. Putterman
Interfaces and Wetting
B. Widom
D. Abraham, B. Law, Y.-R. Shen
Fluids in Porous Media
G. Stell
A. Liu, M. Rosinberg
Dynamics in Liquids
D. Coker
M. Fayer, S. Ruhman, J. Tully
Glasses and Supercooled Liquids
A. Angell
M. Ediger, A. van Blaaderen
Complex Fluids: Assembly and Dynamics
J. Wheeler
D. Chandler, G. Gompper, D. Roux
Unusual Phase Transitions
M. Klein
D. Frenkel
Colloidal Systems
C. Murray
S. Fraden, H. Lekkerkerker, D. Weitz
Poster chair:
Prof. Jiri Jonas
Beckman Institute
405 N. Mathews Ave.
Urbana, IL 61801
USA
fax (217) 244-0987
email:
jonas@director.beckman.uiuc.edu

Magnetic Nanostructures

Schwäbisches Bildungszentrum
Irsee, Germany

S. S. P. Parkin, chair
J. Mathon, vice chair

17 September — 23 September

Role of Interfaces on Transport Properties
A. Fert
R. Coerhorn, M. Salamon, Vedyaev
Role of Interface Properties on Interlayer Coupling
G. Mathon
P. Bruno, D. Edwards
Novel Structures
G. Prinz
J. Bass, M. Johnson, M. G. Phillips
Interface Structure - Advanced Characterization
I. Schuller
C. Colliex, W. J. M. de Jonge, E. Fullerton
Interface Electronic Structure
P. Johnson
A. Freeman, F. Himpsel, S. Maekawa
Spin-Dependent Transmission of Electrons Across Interfaces
R. Meservey
J. Moodera, H. C. Siegmann
Interface Magnetism
J. Mathon
B. Gyorffy, J. Stohr, M. Van Shilfgaarde
Magnetic Surface Anisotropy
C. Chappert
R. Allenspach, B. Engel
Late Developments and Future Prospects
S. S. P. Parkin

Magnetic Resonance

Brewster Academy
Wolfeboro, NH

J. Schaefer, chair
A. N. Garroway, vice chair

June 25 — June 30

Optical Pumping
J. S. Waugh
R. Tycko, K. Zilm
Biological Solids
R. G. Griffin

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

G. Drobny, A. McDermott, E. Oldfield
At the Magic Angle
C. Fyfe
D. Alderman, A. Vega, S. Vega,
Force Microscopy
C. S. Yannoni
M. Bloom, D. Rugar
Water
L. Jelinski
R. Bryant, L. Jelinski, R. R. Vold
Pulsed ESR
B. J. Gaffney
D. Stehlik, H. Thomann
In the Gas Phase
C. P. Slichter
A. Marshall, M. Mehring, J. Schmidt
Fifty Years of NMR
E. O. Stejskal
N. Bloembergen, J. Jonas, D. McCall, A. Pines
Polymers
K. J. Packer
G. Hoatson, H. W. Spiess, D. L. VanderHart

Mammary Gland Biology

Colby-Sawyer College (S)
New London, NH

J.T. Emerman, chair
F.L. Schanbacher, vice chair

18 June — 23 June

Genes Involved in Normal Mammary Gland Development and Breast Cancer
B. Weber
J. Papkoff, V. Rotter, B. Weber
Cellular Growth Mechanisms and Apoptosis
N. Davidson
N. Davidson, R. Strange, R. Sutherland
Hormones and Growth Factors
G. Heppner
S. Frawley, G. Heppner, K. Horwitz, L. Murphy
Epithelial-Stromal Interactions
S. Haslam
S. Haslam, L. Matrisian, O. Petersen
Signal Transduction Pathways
M. Bissell
M. Bissell, N. Hynes, R. Lupu
Lifestyles and Breast Cancer
H. Thompson
C. Ip, D. Spiegel, H. Thompson
Transgenic Models for Mammary Gland Studies
R. Cardiff
R. Cardiff, R. Coffey, W. Muller, J. Rosen
The Mammary End Bud as an Experimental Animal
J. Emerman
C. Daniel
Therapeutic Approaches for Breast Cancer
J. Taylor-Papadimitriou
R. Clarke, M. Gould, J. Taylor-Papadimitriou

Matrix Isolated Species, Chemistry and Physics of

Plymouth State College, (N)
Plymouth, NH

L. B. Knight, Jr., chair
B. Ault, vice chair

30 July — 4 August

Matrices as Reaction Mediums
A. Apkarian, S. Ogden
S. Abrash, S. Anderson, S. Collins, I. Dunkin, G. Maier
Astrophysical Molecules
J. C. Rivoal
L. Allamandola, L. d'Hendecourt, M. Vala
Laser Vaporization Experiments
A. McKinley, Y-P Lee
L. Andrews, V. Bondybey, M. Fajardo, M. Morse, W. Weltner, Jr.
Theoretical Studies
T. Shida
C. Bauschlicher, H. F. Schaefer, III
Matrix Structure and Properties
J. Winn, H. Knuttu
Y. Haas, M. C. Heaven, E. Knözinger, B. Nelander, L. Raff, C. Wight
Unusual Matrices
W. Klotzbücher
H. Frei, G. Scoles
Spectroscopy of New Species
M. Räsänen, W. Person
A. J. Downs, W. M. R. Graham, L. Manceron, Z. Mielke, J. M. Parnis
Mass Selection
G. Leroi
D. Lindsay , J. Maier
Clusters and Radical Intermediates
J. A. Howard, A. M. Smith
J. Gilbert, M. Jacox, P. H. Kasai, B. Mile, O. M. Nefedov

Matrix Metalloproteinases

Proctor Academy
Andover, NH

H. Nagase, chair
L. M. Matrisian, vice chair

16 July — 21 July

Structure and Function
J. F. Woessner, Jr
W. Bode, G. Murphy, H. E. Van Wart, J. F. Woessner, Jr.,
Activation and Substrate Specificity:
H. Nagase
R. A. Black, G. I. Goldberg, S. M. Krane, M. Seiki
Inhibition of MMPs
H. E. Van Wart
K. Appelt, A. J. P. Docherty, M. Visnick and J. J. Birktoft, R. Williamson
Regulation of MMP Gene Expression
C. E. Brinckerhoff
P. Angel, C. E. Brinckerhoff, J. M. Dayer
MMPs in Disease I
A. R. Poole
K. Gijbels, M. W. Lark, A. R. Poole, H. G. Welgus
MMPs in Disease II (Cancer)
Y. A. DeClerck
P. Basset, P. D. Brown, C. Lopéz-Otín, W. G. Stetler-Stevenson,
Development
L. M. Matrisian
D. R. Edwards, Y.-B. Shi, K. Tryggvason, Z. Werb
Selected Poster Presentations
D. E. Woolley
Physiological Roles of MMPs
H. Birkedal-Hansen
J.-M. Delaissé, S. Fisher, J. A. Madri, M. S. Pepper

Mechanisms of Membrane Transport Proteins

Holderness School
Plymouth, NH

R. Kopito, chair
C.W Slayman, vice chair

25 June — 30 June

Structural Aspects of Channels and Transporters
C. Miller
P. Agre, M. Akabas, J. Rosenbusch, N. Unwin
Selectivity and Permeation Pathways
A. Karlin
M. Caron, D. Gadsby, J. Hanrahan, C. Miller, R. Tsien
Gating Mechanisms and Charge Movements
S. Garber
R. Adrich, A. Finkelstein, D. Hilgemann, E. Wright
Synthesis and Assembly of Channels and Transporters
D. Fambrough
K. Campbell, W. Green, P. Pfaffinger, S. Simon, S. Sine
Restriction of Channels and Transporters to Regions of Membrane Specialization
E. Rodriguez-Boulan
V. Bennett, A. Fox, W. J. Nelson, W. Roberts
Late-Breaking Science Symposium
C. Slayman
Regulation of Channels and Transporters by Phosphorylation
G. Breitwieser, J. Pouyssegur
J. Adelman, G. Breitwieser, D. Clapham, S. Grinstein, T.-C. Hwang, I. Levitan, R. Lewis, K. Philipson, W. Zagotta
Channels and Transporters of Intracellular Organelles
Q. Al-Awqati
B. Block, B. Ehrlich, M. Forgac, D. MacLennan, T. Rapoport
Novel Transporters and Functions
R. R. Kopito
P. Gros, M. Hediger, S. Michaelis, B. Rossier, J. Schaffer

Mechanisms of Toxicity

Kimball Union Academy
Meriden, NH

E. Faustman, chair
W. F. Greenlee, vice chair

6 August — 11 August

Genetic Targets of Toxicant Induced Damage
E. M. Faustman
Genetic Determinants of Susceptibility to in vitro and in vivo Cell Transformation
C. L. Walker
Role of Metals in Gene Expression
M. Costa
Toxicant Dependent Activation of Transcription Factors and Gene Expression
W. F. Greenlee
Endocrine Disruptors
K. Shiverick
Genetic Susceptibility of Environmentally-Induced Developmental Defects
R. H. Finnell
Oxidative Stress Responses: Role in Toxicity
T. J. Kavanaugh

Medicinal Chemistry

Colby-Sawyer College (N)
New London, NH

A. Krantz, chair
E. R. Larson, vice chair

30 July — 4 August

New Opportunities in Purinergic Receptor Pharmacology
M. Williams
L. Knutsen, M. Williams, TBA
Special Topics in Medicinal Chemistry
A. Villalobos
Bacterial Antibiotic Resistance – New Therapeutic Strategies
R. Cooper
W. Baker, R. Cooper, M. Greenlee, P. McGuirk, A. Thomas
Protein/Protein Interactions and Transcriptional Regulation
T. Rosen
J. Brugge, G. Crabtree, D. Sternbach, TBA
In Vitro Strategies for Drug Metabolism and Toxicology
B. M. Silber
G. Fred, S. Obach, D. Slaughter, TBA
New Technologies for Combinatorial Drug Discovery
E. Martin
G. Ballinger, P. Bartlett, S. Wilson

Membranes: Materials and Processes

Plymouth State College (N)
Plymouth, NH

E.L. Cussler, chair
G. Belfort, vice-chair

23 July — 28 July

Separations of Gases
B. Bikson, D. Edlund, W. Koros, S. Sircar, H. Strathmann
Separations in Liquids
M. Etzel, H. Karlsson, J.T.F. Keurentjes, S. McCray, M. Mulder
Membrane Formation and Function
A. Balazs, Y.C. Jean, A. McHugh
Pores in Membranes
J. Beck, G.E. Blomgren, D. Fritsch, R. Spotnitz
Module Design
C. Gooding, W. Haworth, G. Jonsson, J.G. Wijmans

Metal & Semiconductor Clusters

Colby-Sawyer College (N)
New London, NH

R. L. Whetten, chair
M. F. Jarrold, vice chair

6 August — 11 August

Carbon and Silicon Nanostructures
S. Iijima, W. Andreoni
L. Brus, T. Ebbesen, R. Smalley

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Novel Microscopies for Clusters I
K. Sattler
M. Lagally, P. Thiel
Novel Microscopies for Clusters II
R. Whetten
L. Allard, N. Garcia, TBA
Plasmons, Fission, Charging, and Shapes I
W. Knight, W. deHeer
T. P. Martin, W. Ekart
Plasmons, Fission, Charging, and Shapes II
M. Broyer
C. Bréchignac, H. Haberland, C. Yannouleas
Semiconductor Quantum Dots
M. Bawendi
P. Alisavatos, A. Chemseddine, A. Zunger
Nanoscale Magnets and Colloidal Metals
A. Henglein
D. Awschalom, R. Whyman
Small Is Different
R. Berry
U. Landman
Collisions and Reactive Processes
M. El-Sayed
M. Bowers, R. Compton, S. Riley

Microbial Adhesion, Molecular Mechanisms of

Salve Regina University
Newport, RI

E. Tuomanen and
A. Zehnder, co-chairs

25 June — 30 June

Physical-chemistry of Adhesion and Biofilms
E. Rosenberg
H. Harms, B. McBride, H. Rijnaarts
Biofilms on Implants
A.G. Gristina
H. Busscher, F. Waldvogel
Targetting of Bacteria
J. Shapiro
M. Donnenberg, M. Hostetter, L. Miller, L. Schlessinger
Regulation of Adhesins
B. Iglewski
A. Barbour, J. Hacker
Signalling I
S. Long
T. Bisseling, J. Denarie, E. Groisman, A. Stevens
Signalling II
P. Sansonetti
B. Iglewski, A. Zychlinsky
Adhesin/Receptor Structure
J. van Putten
C. Martens, R. Masure, N. Sharon, M. Virji
Adhesion/Invasion
B. Finlay
S. Normark, P. Sansonetti
Adhesins and Therapeutics
S. Normark
R. Smith, C. Svanborg, D. Zopf

Microbial Population Biology

Plymouth State College (N)
Plymouth, NH

D. Dykhuizen, chair
R. Lenski, vice chair

16 July — 21 July

Ecological Causes of Selection
L. Chao
J. Adams, T. Dean, J. Mongold
Ecological Dynamics
A. Bennett
M. Powers, P. Rainey
Population Structure, Clonality and Recombination, Part 1
P. Riley
F. Cohan, V. Souza, T. Whittam
Population Structure, Clonality and Recombination, Part 2
D. Guttmann
K. Nelson, B. Spratt
Evolutionary Aspects of Mutation
P. Foster
J. Drake, S. Rosenberg, P. Sniegowski
How Many Species in Bacteria?
A. Campbell
N. Pace, V. Torsvik
Evolution of Virulence
J. Bull
P. Ewald, B. Levin, R. Moxon
Darwinian Medicine and Posters
C. Istock
C. Istock, R. Redfield, G. Williams
Deep Evolution
F. Doolittle, B. Golding

Molecular Membrane Biology

Proctor Academy
Andover, NH

L. Geirasch, chair
S. R. Pfeffer, vice chair

9 July — 14 July

Bacterial and Organellar Membrane Protein Genesis
W. Wickner
S. Hultgren, J. Nunnari, K. Pfanner, D. Schnell
Protein Translocation and Folding in the Endoplasmic Reticulum
R. Gilmore
M. J. Gething, T. Rapoport, P. Walter
Membrane Protein Structure
P. Bjorkman
H. Michal, J. Rosenbusch
ER and Golgi Trafficking
R. Scheckman
W. Balch, S. Ferro-Novick, P. Novick, J. Rothman
Nuclear Import/Endocytosis
S. Schmid
D. Forbes, D. Görlich, M. Robinson
Maintenance of Organelle Identity
G. Warren
P. Cosson, V. Malhotra, G. van Meer
Protein Sorting Pathways
I. Mellman
S. Emr, K. Simons, T. Stevens
Membrane Fusion
J. White
C. Blobel, J. Fernandez, D. Wiley

Molten Salts and Liquid Metals

Plymouth State College (S)
Plymouth, NH

J. Enderby, chair
C. Hussey, vice chair

6 August — 11 August

Ionic, Semiconducting and Metallic Clusters
D. L. Pride
A. O. Alivisatos, L. Brus, K. Rademann, C. Huber
Electrodeposition of Metals and Alloys
R. Turnold
G. Picard, G. Stafford
Metal-Non Metal Transitions in Liquid Alloys
A. Adya
A. C. Barnes, M. J. Regan, M. L. Saboungi
Spectroscopy in Molten Salts
G. Paptheodorou
M. H. Brooker, G. Gilbert
Novel Molten Salt Chemistry
J. Wilkes
R. Pagni, K. R. Seddon
Waste Management and the Liquid State
W. A. Averill, J. L. Fulton, L. M. Toth
Molten Salt Technology: Application to Batteries and Fuel Cells
D. Inman
R. Carlin, R. Selman
Multidisciplinary Aspects of Molten Salts and Metals
J. van Zytveld
M. Blander

Mycotoxins and Phycotoxins

Plymouth State College (N)
Plymouth, NH

D. Baden, chair
W. Haschek-Hock, vice chair

25 June — 30 June

Environmental and Host Effects on Toxin Production
G. Doucette
C. Bacon, J. Duvick, J. Wekell
Toxins in Food and Feeds: Assessing Risk and Detection Limits
D. Miller
T. Kuiper-Goodman, M. Quilliam, Poster speaker TBA
Molecular Mechanisms of Toxicity
M. Runnegar
M. Davis, J. Eriksson, E. YC Lee
Toxin Synthesis and Structure/Activity Relationships
R. Gawley
B. Blackwell, W. T. Shier, E. Theodorakis
Cellular and Molecular Mechanisms of Carcinogenesis
W. Marasas
W. Gelderblom, R. Riley, J. Shroeder
Toxin Biosynthesis
T. Hohn
N. Keller, J. Wright, Poster speaker TBA
Novel Toxins, Toxicoses and Therapy
W. Bryden
M. Kent, R. Lewis, E. Noga, D. Williams
Toxin Detection: Functional, Immunologic, and Genetic Methods
M. Poli
C. Maragos, M. Wekell
Future Research Directions: Meeting Perspective
Daniel Baden and Wanda Haschek

Myogenesis

Tilton School
Tilton, NH

B. Nadal-Geinard, chair
C. Ordahl, vice chair

9 July — 14 July

Embryology of Muscle Precursor Patterning
C. Ordahl
J. Cooke, N. Le Douarin, M. Westerfield
Genetics of Muscle Precursor Patterning
N. Rosenthal
S. Abmayr, R. Krumlauf, P. Rigby
Tissue Induction of Myogenic Precursor Cell
C. Emerson
J. Gurdon, A. Lassar, M. Tessier-Lavigne
Emergence and Diversication of Myogenic Precursor Lineages
G. Cossu
M. George-Weinstein, S. Hauschka, C. Lance-Jones
Extracellular Matrix Signalling of Myogenic Precursors
S. Kaufman
R. Hynes, K. Knutsen, A. Starzinski-Powitz
Cell-Cell Signalling in Myogenic Specfication
R. Derynck
L. Niswander, B. Olwin, D. Sassoon
Molecular Control of Myogenic Determination
B. Nadal-Ginard
H. Arnold, M. Buckingham, E. Olson, H. Weintraub
Keynote Address
B. Christ
Molecular Basis of Muscle Diseases
K. Campbell
H. Blau, D. Housman, L. Leinwand, R. Steinhardt

Natural Products

New England College
Henniker, NH

R. L. Danheiser, chair
W. R. Baker, vice chair

2 July — 7 July

Synthetic Chemistry
E. M. Carreira, R. M. Coates, M. Tius, P. Wipf
R. K. Boeckman, S. L. Buchwald, D. P. Curran, S. E. Denmark, E. Nakamura, S. D. Rychnovsky, K. B. Sharpless, K. Suzuki
Bioorganic Chemistry of Natural Products
R. S. Coleman
J. C. Clardy, D. E. Kahne, A. Schepartz
Natural Products Isolation and Structure Elucidation
J. V. Heck, A. Yamashita
E. Block, D. Schroeder, S. B. Singh, W. Steglich
Natural Products and Drug Discovery
S. E. Kelly
M. Lewis, B. A. Lefker, D. Sternbach
Molecular Diversity and Natural Products
G. A. Krafft
M. Desai, J. Ellman, M. Ohlmeyer

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Neural Plasticity

Brewster Academy
Wolfeboro, NH

R.K. Murphey, chair
S. Hockfield, vice chair

16 July — 21 July

Neutrophins and Plasticity
G. Yancopoulos, Keynote Speaker
Gene Targeting and Plasticity of Cells, Circuits and Behavior
A. Silva
J. McNamara, M. Stryker, J. Wehner
Localization, Translation, and Function of RNA in Dendrites: Potential Relevance to Synaptic Plasticity
H. Potter
O. Steward, P. Worley, M. Mayford
Neocortical Plasticity: A re Developmental and Adult Plasticity Related?
L. Katz
C. Gilbert, K. Fox, L. Maffei
Long Term Depression
D. Madison
M. Bear, R. Malenka, S. Seigelbaum, S. Dudek
Target Effects on Synaptic Function
S. Landis
G. Davis, R. Nishi, R. Zigmond
Synaptic Plasticity and Activity; Vital Dyes and Imaging Synaptic Function and Plasticity
J. Lichtman
R. Balice-Gordon, W. Betz, W. Thompson
Organization of Postsynaptic Proteins at the Synapse
M. Kennedy
J. Fallon, S. Froehner, H. Betz
Synaptic Vesicle Proteins and Synaptic Release
D. Landis
G. Augustine

Neurotrophins

Plymouth State College (S)
Plymouth, NH

M. V. Chao and Lloyd A. Greene, co-chairs

23 July — 28 July

Development and Differentiation
C. Shatz
D. Anderson, Y.-A. Barde, C. Kalcheim
Biological Actions
H. Phillips
M. Barbacid, B. Hempstead, S. Varon
Survival
E. Johnson
P. Bartlett, A. Davies, J. Yuan
Plasticity
I. Black
C. Gall, M.-M. Poo, H. Thoenen
Repair and clinical considerations
F. H. Gage
D. Price, P. Aebischer, G. Brodeur
Receptors and Signaling
E. Shooter
M. Bothwell, G. Guroff, D. Kaplan, J. Schlessinger
Gene expression
R. Bradshaw
M. Greenberg, S. Halegoua, R. Roeder
New factors and actions
G. Heinrich
G. Yancopoulos, J.A. Kessler, G. Fischbach, K. Nikolics

Nonlinear Optics and Lasers

Tilton School
Tilton, NH

Y. Silberberg, chair
R.E. Slusher, vice chair

30 July — 4 August

Cavity QED and Microlasers
E. Yablonovich
G. Gonokami, S. Haroche, Y. Yamamoto
Ultracold Atoms
R. E. Slusher
M. Kasevich, F. Shimizu
Ultrafast Optics
W. Knox
F. Krausz, G. Mourou, M. Murnane
Solitons
A. M. Weiner
J. P. Gordon, H. A. Haus, C. R. Menyuk, A. W. Snyder
Novel Techniques
D. Anderson
S. E. Harris, A. Lewis
New Sources
A. Schmidt
F. Capasso, A. Nurmikko
Historic Perspective
H. A. Haus
C. Townes

Nuclear Chemistry

Colby-Sawyer College (N)
New London, NH

W. Nazarewicz, chair
W. Trautmann, vice chair

18 June — 23 June

The focus of the conference will be on nuclear structure studies.

Recent Advances in High-Spin Physics
P. Fallon
H. Flocard, R. Janssens, B. Haas, D. Bazzacco
Physics with the New Arrays: Where Are We Heading?
T.L. Khoo
C. Baktash, I. Hamamoto, M. Riley, J. Sharpey-Schafer, F. Stephens
Physics from the Large Detector Arrays
D. Ward
speakers: to be announced
Theoretical Explanations of Latest High-Spin Data
D. Fossan
I. Ragnarsson, R. Wyss, J.F. Berger
Far from Stability
J. Garrett
B. Sherrill, T. Kobayashi. J. Dobaczewski, K.-L. Kratz
Exotic Nuclei
G. Muenzenberg
V. Ninov, P. Woods, K. Rykaczewski
Collectivity and Dynamics
E. Zganjar
A. Bulgac, J. Wood, G. Ter-Akopian
Big Bang
W. Trautmann
M. Turner
Low Spin Nuclear Structure
K. Heyde
V. Zelevinski, U. Kneisll, N. Rowley

Nuclear Physics

Tilton School
Tilton, NH

A. B. Balantekin, chair
D. Beck, vice chair

23 July — 28 July

QCD in Nuclear Physics and Astrophysics
Probing the Spin Structure
R. McKeown
B. Frois, C. Jones, R. Prepost
Theoretical Perspectives
J. Randrup
G. Bertsch, J.W. Negele
Relativistic Heavy Ion Physics
J. Thomas
P. Braun-Munzinger, P. Jacobs, W. Zajc
Fundamental Applications of Nuclear Physics
P. Parker
S.J. Freedman
Solar Neutrinos and Neutrino Physics
R. Stokstad
J. Bahcall, M. Gai, W. Louis
Properties of Hadronic Systems
R. Springer
D. Kaplan, C. Roberts
The Early Universe
T. Kajino
G. Fuller, C. Hogan, A. Olinto
Dark Matter Searches
D. Beck
C. Alcock
Prospects in Electromagnetic Physics
B. Mecking
D. Geesaman, X. Ji, M. Musolf

Nucleic Acids

New Hampton School
New Hampton, NH

J. Feigon and D. H. Turner, co-chairs

B. Bass and R. Gumport, co-vice chairs

11 June — 16 June

Cleavage and Ligation
T. Cech
C. A. Fierke, A. Mondragon, M. Moore
Structure and Dynamics
D. Crothers
Steve Schultz, G. Varani, E. Westhof
Transcription
A. Berk
A. Berk, J. Conaway, E. C. Friedberg, R. A. Young
Translation
R. Parker
H. Noller, R. Lehmann, R. Parker
Replication and Recombination
E. Blackburn
E. Blackburn, N. Craig, R. Craigie
Nucleic Acid Selection
J. Szostak
G. Joyce, M. Yarus
Repair and Modification
P. Modrich
W. Keller, G.-M. Li, I. Mellon, L. Simpson, R. Wood
Assembly and Transport
I. Mattaj
G. Dreyfuss, I. Mattaj, R. Reed, M. Rosbash, R. Singer
Synthesis and Therapeutics
F. Eckstein
S. Brown, P. Dervan, F. Eckstein, B. Froehler, W. Pieken

Optical Signal Processing and Holography

Plymouth State College (S)
Plymouth, NH

W. Thomas Cathey, chair
H. Szu, vice chair

26 June — 30 June

Integrated Optical and Digital Processing Systems
H. J. Caulfield
J. Walkup, E. Dowski
Novel Imaging Systems and Design Techniques
W. Rhodes
A. Lohmann, E. Leith, J. Ojeda-Casteneda
Holographic and 3-D Displays
S. Benton
S. Benton, H. Bjelkhagen, S. Stevenson
Holographic Data Storage
D. Psaltis
L. Hesselink, G. Sincerbox, S. Esener, R. Linke
Superresolution
N. Farhat
W. Rhodes, R. Hunt

Organic Photochemistry

Salve Regina University
Newport, RI

F. D. Saeva, chair;
D. G. Whitten, vice chair

16 July — 21 July

Photoinduced Electron Transfer (PET) Concepts/Chemistry
F. Lewis
I. Gould, P. Mariano
PET Synthetic Applications
R. DeVoe
A. Albini, J. Mattay
Molecular Photochemistry
H. Zimmerman
J. Pavlik, J. A. Pincock
Ordered Media
R. Weiss
D. Markovitsi, I. Yamazaki
Multichromophoric Systems
D. Gust
A. M. Brouwer, J. F. Stoddart
Organometallic Photochemistry
E. Oliveros
K. Schanze
TICT Mechanisms
A. Testa
K. Zachariasse
Radical Intermediates/Miscellaneous
K. Schaffner
R. A. Caldwell, J. Michl, J. Wirz
Photochemical Paradigm for the 90's
I. Gould
N. Turro

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Organic Reactions and Processes

New Hampton School
New Hampton, NH

R. J. Pariza, chair
R. Linderman, vice chair

16 July — 21 July

B. Anderson, T. Blacklock,K. Buszek, M. Chorghade, J. Dillon, D. Dolphin, D. Drueckhammer, G. Fleet, P. Fuchs, J. Gervay, S. Hanessian, M. Harmata, T. Hudlicky, P. Kocienski, L. Liebeskind, M. Lipton, D. Livingston, P. Magnus, F. McDonald, L. Mitscher, G. Petskog, D. Philipauskas, T. Rajanbabu, R. Rao, T. Rathman, R. Root-Bernstein, G. Roth, M. Sibi, M. Sodeoka, K. Sorgi, J. Wemple, C. Wong, W. Wulff, N. Yasuda

J. Behling, W. Bunnelle, R. Holton, C. Schmid

Organometallic Chemistry

Salve Regina University
Newport, RI

K. G. Moloy, chair
J. A. Gladysz, vice chair

9 July — 14 July

W. D. Jones
W. D. Harman, R. H. Morris
A. P. Sattelberger
R. R. Schrock (AMC Award Lecture), B. E. Bursten, S. A. King, R. P. Beatty
P. L. Watson
J. M. Brown, P. J. Shapiro, P. J. Stang
L. R. Sita
J. Stein, W. Tumas, J. F. Hartwig
P. A. Shapley
K. Yamamoto, J. M. Mayer, P. H. M. Budzelaar
R. M. Bullock
A. Togni, M. J. Burn, G. Erker
K. Ruhlandt-Senge
M. Dreiss, M. Y. Darensbourg, S. P. Nolan
P. S. Pregosin
D. F. Shriver, L. McElwee-White, F. Mathey
B. Bosnich
M. L. H. Green, C. P. Kubiak

Origins of Solar Systems

New Hampton School
New Hampton, NH

A. I. Sargent, chair
J. F. Kerridge, vice chair

18 June — 23 June

Molecular Cloud Collapse and Formation of the Protosolar Nebula
E. H. Levy
A.A. Goodman, A. P. Ross
Observations of Protoplanetary Disks
C. J. Lada
D. N. C. Lin, M. J. McCaughrean
Chemical Evolution and Nucleo-synthesis
A. G. W. Cameron
G. A. Blake, M. Busso, D. D. Clayton
Interstellar Dust in the Solar System
D. S. Woolum
D. E. Brownlee, U. Ott
Dust in Circumstellar Environments
S. P. Ruden
S. V. W. Beckwith, J. N. Cuzzi, B. M. Zuckerman
Effect of the Secondary Objects on Protoplanetary Disks
C. Porco
A. M. Ghez, P. D. Nicholson
Dissipating the Disks - Chronology
J. J. Lissauer
P. Cassen, S.E. Storm
Dissipating the Disks - Radiochronology
J. A. Wood
G. W. Lugmair, F. A. Podosek
Comets
M. J. Mumma
C. R. Chapman, J. X. Luu, S. J. Weidenschilling

Parasitism

Colby-Sawyer College (S)
New London, NH

S. Beverley, chair
J. McKerrow, vice chair

25 June — 30 June

Vector Biology
A. James
M. Shahabudin, T. Lanzaro, D. Severson
Apicomplexan Genetics
D. Roos
J. Boothroyd, T. Wellems, D. Wirth
Virulence Factors
S. Turco
W. Petri, M. Pereira, S. Hajduk
Organelles
J. Feagin
R. Howard, CC Wang, P. Englund
Immunology
P. Scott
D. Harn, E. Pearce
Cell Biology
F. Gillin
D. Russell, N. Andrews, K. Joiner
Anticoagulation & Parasitology
A. Agnew
TBN
Biochemistry & Drug Design
B. Ullman
TBN
Developmental Biology of Parasitic Worms
D. Smith
TBN

Phagocytes

Holderness School
Plymouth, NH

R.B. Johnston, Jr., chair
R.A. Clark, vice chair

11 June — 16 June

Zanvil A. Cohn Lecture
S. Klebanoff
R. Steinman
Gene Regulation/Transcription
A. Ezekowitz
M. Aguet, M. Cassatella, M. Dinauer, A. Ezekowitz, C. Schindler
Endotoxin Modulation of Gene Regulation
A. Ding
C. McCall, R. Ulevitch, poster presentations
Phagocyte Transmigration
S. Silverstein
J. Anderson, J. Madara, S. Silverstein
Adhesion/Integrin Systems
R. Clark
E. Brown, C. Doerschuk, poster presentations
Signal Transduction -- Cytoskeleton
T. Stossel
A. Aderem, S. Cockcroft, J. Hartwig, T. Howard
Signal Transduction -- Oxidase and Myelopoiesis
A. Verhoeven
J. Ihle, L. McPhail, poster presentations
Host-Microbe Interactions
S. Gordon
A. Ezekowitz, M. Horwitz, C. Nathan, P. Stahl
The Oxidase
B. Babior
G. Bokoch, T. Leto, poster presentations
Clinical Extensions
J. Curnutte
M. Bevilacqua, J. Curnutte, H. Malech, M. Zasloff

Photoacoustic & Photothermal Phenomena

Colby-Sawyer College (N)
New London, NH

A. Mandelis, chair
A. C. Tam, vice chair

11 June — 16 June

Spectroscopy and Surface Science
J. O. Tocho
M. Chirtoc, H. Talaat
Thermophysics
A. Cezairliyan
D. Balageas, M. Marinelli, J. Thoen
Novel Trends: Thermal Dynamic Gratings
M. Terazima
G. Diebold, R.E. Imhof, K. A. Nelson
Environmental and Agricultural Applications
H. Vargas
D. Bicanic, S. Egerev
Remote Sensing: Sensors and Devices
R.G. Barile
W. Faubel, M. W. Sigrist
Electronic Materials
A. Rosencwaig
G. Amato, D. Cahen
Biological and Medical Applications
J. Szurkowski
J-S. Antoniow, S. E. Braslavsky
Non-Destructive Evaluation
D.O. Thompson
Y.H. Berthelot, H-D. Geiler, J. C. Murphy
Analytical Chemistry and Applied Spectroscopy
J. McClelland
S. Bialkowski, R. O. Carter, R. A. Palmer

Physical Organic Chemistry

Holderness School
Plymouth, NH

P. Dowd, chair
J. M. McBride, vice chair

2 July — 7 July

Fullerenes
R. C. Haddon, P. Krusic, M. Saunders, L. T. Scott
Theory of Non-Kekulé and High Spin Molecules
W. T. Borden, C. J. Cramer, K. Jordan
Low-Barrier Hydrogen Bonds
J. A. Gerlt, J. P. Guthrie, M. Kreevoy
Gas Phase Ion Chemistry
J. I. Brauman, G. B. Ellison, R. R. Squires
Molecular Recognition
S. Gellman, F.-G. Klarner, C. S. Wilcox
Mechanistic Organic Chemistry
A. de Meijere, W.Doering
Complexes
P. Beak, D. B. Collum
Bioorganic Chemistry
C. J. Burrows, R. R. Rando

Plant and Fungal Cytoskeleton

Proctor Academy
Andover, NH

S. Wick, chair
D. Drubin, vice chair

23 July — 28 July

Actin and Actin Binding Proteins
J. Cooper
D. Botstein, T. Karpova, H. Perez, R. Valenta
Motors and Associated Proteins
J. Rosenbaum
A. Hoyt, D. Menzel, M. Porter
Organelle Movements in Development
B. Palevitz
H. Kazama, R. Morris, M. Plamann, L. Pon
Polarity, Development and Morphogenesis
P. Helper
K. Cztmmek, D. Kropf, R. Overall
Cytokinesis
Z. Cande
F. Chang, A. Mie Emons, S. Harris, L. Smith
Plant Sexual Reproduction
M. Cresti
A. Cheung, B.-Q. Huang, B. Palevitz, M. Raudaskowski, T. Shimmen, A. Tiezzi
Microtubule Organization and Organizing Centers
R. Morris
T. Horio, J. Hush, M. Rose, T. Stearns
Cell Wall-Membrane Links to Cytoskeleton
R. Overall
S. Kaminskyj, R. Nagai
Cell Cycle and Signal Transduction
J. Pringle
D. Drubin, D. Kellogg, R. Li, M. Schindler

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Plant Cell Genetics and Development

Brewster Academy
Wolfeboro, NH

R. Jorgensen, chair
J. Messing, vice chair

11 June — 16 June

Embryo Patterning: Shoot and Leaf Primordia
I. Sussex
K. Barton, S. Clark, S. Hake, G. Jurgens
Meristem Diversity and Evolution
I. Sussex
M. Christianson, L. Graham, J. Jernstedt, R. Litz
Root Apices
L. Feldman
P. Barlow, M. Hawes, N. Kerk, B. Scheres
Methods of Cell Genetics
J. Messing
C. Dean, E. Lam, R. Martienssen
Induction of Flowering
E. Irish
R. Amasino, G. Coupland, M. Koornneef, S. Poethig
Heritable Epigenetic States
R. Martienssen
V. Chandler, R. Jorgensen, J. Messing
Evolution of Reproductive Morphology
M. Christianson
J. Doebley, M. Frolich, C. S. Gasser, T. N. Taylor
Special Lecture
J. Messing
Reproductive Morphology
C. Gasser
G. Angenent, E. Irish, D. Weigel

Plasmid and Chromosome Dynamics

Plymouth State College (S)
Plymouth, NH

D. Helinski, chair
V. A. Zakian, vice chair

2 July — 7 July

Chromosomal Boundaries and Organization
N. Cozzarelli
W. Bickmore, N. Cozzarelli, M. Dunaway, C. Peterson, V. Ramakrishnan
Epigenetic Control of Chromosome Behavior
R. Sternglanz
C. Brown, L. Clarke, S. Henikoff, R. Sternglanz, V. Zakian
Initiation of DNA Replication
R. Novick
D. Chattoraj, J. Diffley, R. Novick, B. Tye, S. Wickner
DNA Replication Events
C. Newton
D. Bastia, E. Fanning, D. Helinski, V. Lundblad, C. Newton
Segregation Elements
S. Austin
S. Austin, J. Carbon, S. Cohen, M. Fitzgerald-Hayes, A. Klar
Forces Moving Chromosomes
S. Endow
S. Endow, S. Hiraga, E. Lanka, T. Stearns
Checkpoints and DNA Replication
K. Nordstrom
K. Gerdes, A. Hoyt, K. Nordstrom, H. Schwab, S. Seror, T. Weinert
DNA Rearrangements
J. Broach
J. Broach, S. Gerbi, R. Johnson, M. Lieber, E. Selker
Transposons and Transpositions
N. Craig
N. Craig, T. Eikbush, R. Levis, H. Nakai, S. Sandmeyer

Polyamines

Kimball Union Academy
Meriden, NH

A. Fairlamb and I. Scheffler, co-chairs
J. Mitchell and Olli Jänne, co-vice chairs

11 June — 16 June

Macromolecular Interactions
T.J. Thomas
T. Record, J. Parello, M. L. Hackert
Polyamines and the Nervous System
N. Seiler, C. Porter
K. Williams, I. Blagbrough
Metabolism and Transport
R. Davis, C. Byus
S. Le Quesne, K. Igarashi, R. Poulin
Catabolism
D. Morgan, H. Wallace
C. Coleman, J. Klinman/ D. Cai
Functions of Polyamines
A. Pegg, U. Bachrach
C. and H. Tabor, M. H. Park, P. Coffino
Transgenic Plants and Animals
O. Heby, H. Tabor
J. Jänne, S. Minocha
Apoptosis and Cell Death
E. Hölttä, A. Desiderio
John L. Cleveland, Chaim Kahana, D. Kramer
Clinical Aspects
P. McCann, E. Gerner
L. Marton, C. Bacchi
Regulation of ODC and AdoMetDC Expression
L. Persson
D. R. Morris, S.-I. Hayashi and S. Matsufuji, K. Tanaka

Polymer Colloids

Tilton School
Tilton, NH

T. van de Ven, chair
D. Sundberg, vice chair

2 July — 7 July

R. Fitch
R. G. Gilbert, D. K. Sharma
F. Candau
J. M. DeSimone, J. Guillot
D. B. Basset
J.J. G. van Es, P. Sperry, J. Sheehan
I. M. Krieger
M. El-Aasser, J. M. Asua
T. G. M. van de Ven
C. Zukovski, D. A. Saville, H. Ohshima
R. Ottewill
P. M. MacDonald, A. R. Rennie
D. Sundberg
K. Furusawa, J. A. Waters, M. Okubo
C. Pichot
K. Caldwell, W. Norde

Polymers

New England College
Henniker, NH

D. Sogah, chair
R. Gaudiana, vice chair

25 June — 30 June

Program not available

Proteins

Tilton School
Tilton, NH

E.D. Getzoff and L.M. Amzel, co-chairs

18 June — 23 June

Protein Architecture and Structure Prediction
J. Moult
S.H. Bryant, C.A. Orengo, M.J. Sippl
Hydrogen-Bonding and Water
A.M. Gronenborn
G.M. Clore, P.A. Karplus, G.I. Makhatadze, K.P. Murphy, A. Radzicka
Structural and Thermodynamic Aspects of the Denatured State
D. Shortle
K.A. Dill, S.W. Englander, E. Shakhnovich
Chaperone-Assisted Protein Folding
R. Jaenicke
J. Buchner, G.H. Lorimer, S. Wickner
Structure/Function Studies of Macromolecular Assemblies
D.L. Caspar
E. Bullitt, E.A. Merritt, K. Namba, J.A. Tainer, S.G. Wolf
Metalloproteins
J. Peisach
M.W. Adams, B.R. Crane, D.R. Dean
Side Chain Configurational Entropy in Free Energy of Folding and Binding
J. Novotny
R. Abagyan, E. Freire, G.D. Rose
Signal Transduction
H.E. Hamm
S.R. Sprang, W.A. Hendrickson, J. Schlessinger
Keynote Lecture
A.R. Fersht

Purines, Pyrimidines and Related Substances

Salve Regina University
Newport, RI

V. E. Marquez, chair
T. Spector, vice chair

2 July — 7 July

Enzyme Mechanisms (Deaminases)
C. W. Carter, Jr., L. Chan, R. W. Wolfenden
Enzyme Mechanisms (Methylases)
X. Cheng, J. K. Christian
Carbocyclic Nucleotides
K. H. Altmann, R. J. Parry, S. W. Schneller
Enzyme Mechanisms (Dehydrogenases)
B. M. Goldstein, K. W. Pankiewicz
Biochemistry and Pharmacology
J. Bertino, T. Spector, W. Wolf
Pro-drugs
E. Abushanab, G. Gosselin
Structure and Function
C. Altona, J. Chattopadhyaya, S.-F. Chen
Synthetic Methodology (Nucleosides)
M. E. Jung, T. S. Mansour
Synthetic Methodology (Oligonucleotides)
L. Anderson, H. Inoue, Y. Sanghvi

Quantitative Structure - Activity Relationships (QSAR)

Tilton School
Tilton, NH

R. Pearlman, chair
H. Weintraub, vice chair

6 August — 11 August

Combinatorial Chemistry, Diversity & 3D Databases
Y. Martin
J. Blaney, P. Johnson, M. Ross
Combinatorial Chemistry, Diversity & 3D Databases Poster Session
O. Raevsky
Combinatorial Chemistry, Diversity & 3D Databases
S. Barcza
O. Güner, D. Patterson
Recent Applications of Traditional QSAR
G. Famini
M. Abraham, M. Charton, P. Magee
General Poster Session
P. Seybold
Toxicity Prediction
S. DeVito
J. Dearden, V. Gombar
Successful Applications in Structure-Based Design
K. Holloway
G. Marshall, Henri Moereels, R. Wade

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

QSAR Techniques for Structure-Based Design Poster Session
C. Selassie
Successful Applications in Structure-Based Design
A. Hagler
P. Goodford, T. Oprea
Variable Selection
S. Clementi
B. Bush, J. Frazer, H. Kubinyi
General Poster Session
L. Hall
"Nuts and Bolts" Session on the Use of Techniques
L. Balbes
New Technologies
J. Wikel
G. Kellogg, G. Maggiora, D. Rogers

Reactive Polymers, Ion Exchange and Adsorbtion

Salve Regina University
Newport, RI

P. Yarnell, chair
S. Alexandratos, vice chair

23 July — 28 July

Program not available.

Red Cells

Plymouth State College (N)
Plymouth, NH

P. Agre, chair
M. Groudine, vice chair

6 August — 11 August

Membrane Skeleton Proteins
J.S. Morrow
D. Branton, M. Saraste
Structures of Bilayer Spanning Proteins
M.J.A. Tanner
A. Engel, P.S. Low , R.A.F. Reithmeier
Trans Regulation of Gene Expression
B.M. Emerson
R.D. Klausner, S.H. Orkin
Cis Regulation of Gene Expression
M. Groudine
J.D. Engel, F. Grosveld
Developmental Hematopoiesis
R. Patient
E. Dzierzac, L.I. Zon
Erythropoietin and its Receptor
H.F. Bunn
A.D. D'Andrea, G.L. Semenza
Disease Models and Therapies – Membranes
N. Mohandas
C. Brugnara, C.E. Chitnis
Short Talks
J.C. Winkelmann
Disease Models and Therapies – Gene Expression
Y.W. Kan
G.P. Rodgers, G. Stamato-yannopoulos

Rock Deformations

Tilton School
Tilton, NH

T. E. Tullis, chair
H. W. Green II, vice chair

13 August — 18 August

Present Understanding of Deformation on Earth
G. Eisenstadt
H. Green, M. Parmentier, S. Schmid
Ductile Flow Laws: The Laboratory Perspective
A. Fossum
J. Tullis, D. Kohlstedt
Ductile Deformation: Bulk vs. Localized
S. Karato
E. Rutter, B. Hager, A. Nicholas
Do Laboratory-Based Flow Laws Quantitatively Describe Flow in the Earth?
Z. Zheng
R. Peltier, D. Schultz-Ela
Constitutive Laws for Rock Friction
J. Dieterich
N. Beeler, C. Marone, T. Shimo-moto
Do Laboratory-Based Constituve Laws Adequately Describe Faulting in the Earth?
P. Bird
J. Byerlee, J. Rice
The Brittle Ductile Transition
B. Evans
J. Evans, S. Hickman, T.-T. Wong
How Weak Are Faults and Why?
K. Furlong
M. Blanpied, M. Zoback
Outstanding Questions and How to Approach Them
F. Dula
R. Bruhn, R. Buck, F. Chester

Second Messengers

Kimball Union Academy
Meriden, NH

H. Hamm, chair

13 August — 18 August

Interactions Between Growth Factor and G Protein-Mediated Signal Transduction Pathways
B. Errede
T. Sturgill, G. Johnson, J. Schlessinger
Regulation of G Protein-Coupled Receptor Signalling
S. Coughlin
R. Reed, J. Benovic
Structure and Function of Heterotrimeric G Proteins, and Their Roles in Signal Transduction Pathways
E. Neer
J. Noel, D. Stone, S.n Sprang , M. Simon
Role of Posttranslational Modifications in G Protein-Mediated Signalling Pathways
M. Linder
P. Casey , T. Jones
Structure, Function and Regulation of Enzymes Which Control Second Messengers
R. Iyengar
S. G. Rhee , W. Tang, H. Hamm
Pathways of Signal Transduction Mediated by G Protein Beta Gamma Subunits
N. Gautam
L. Luttrell, J. Robishaw
Signalling Pathways Mediated by Small G Proteins
G. Bokoch
L. Cantley, R. Cerione, A. Wittinghofer
Plenary Lecture
H. Bourne
Emerging Pathways of Signal Transduction
J. Spudich
S. Klumpp, H. C. Lee, R. Kolesnick

Solid State Chemistry

Schwäbisches Bildungszentrum
Irsee, Germany

K. Poeppelmeier and G. Meyer, co-chairs

24 September — 29 September

Oxides
A. J. Jacobson
P. Battle, M. Jansen, A. West
Nitrides
H. F. Franzen
F. DiSalvo, H. Jacobs
Superconductivity
J. Burdett
E. Antipov, K. Kishio, B. Raveau
Reactivity of Solids
A. Reller
M. Martin, J. Rouxel
Electronic and Optical Phenomena
J. M. Honig
P. Davies, L. Schneemeyer, C. Torardi
Luminescence
A. Hauser
G. Blasse, C. D. Flint
Framework Materials
G. Ferey
T. Gaffney, A. Navrotsky, W. Sachtler
Past and Future
C. Haas
P. Hagenmüller, R. Hoppe
Theory and Intermetallics
J. D. Corbett
G. Miller, R. Nesper, K. Yvon

Solid State Studies in Ceramics

Colby-Sawyer College (S)
New London, NH

Y.-M. Chang, chair
D. S. Wilkinson, vice chair

23 July — 28 July

A.N. Cormack
G. Ceder, M. J. Gillan
R. Grimes
J. A. Gardner, H. L. Tuller
Dawn Bonnell
H. Kung, G. S. Rohrer, J. Y. Ying,
T.O. Mason
I-W. Chen, D. Chu, J. Maier
P.D. Bristowe
T. Arias, W.-Y. Ching,
Rowland M. Cannon
R. H. French, H. Mullejans, I. Tanaka
D.M. Smyth
C. J. Brennan, D. Dimos

Staphyloccal Diseases

Schwäbisches Bildungszentrum
Irsee, Germany

G. L. Archer, chair
S. J. Projan, vice chair

1 October — 6 October

Global Regulation of Virulence
S. Arvidson
A. Cheung, J. Iandolo, R. Novick
S. aureus Adherence and Adhesins
J. I. Flock
M. Höok, T. Foster/P. Vaudaux
Analysis of S. aureus Virulence Factors
T. Foster
N. Barg, G. Bohach, R. Proctor
Glycopeptide Resistance
K. Dyke
P. Courvalin, P. Reynolds
Methicillin Resistance
H. Chambers
B. Berger-Bächi, J. Ghuysen, K. Hiramatsu
Epidemiology
B. Kreisworth
B. Cookson, F. Tenover
Capsules and Immunity
G. Peters
A. Fattom, J. Lee, G. Pier
Oral Poster Presentations
S. Projan
Virulence Factors of Coagulase-Negative Staphylocci
F. Gotz
S. Gaterman, G. Johnson, D. Mack

Superconductivity

Les Diablerets
Switzerland

R. L. Greene and Ø. Fischer, co-chairs
D. K. Finnemore, vice chair

17 September — 22 September

New Materials
C. W. Chu
M. Hervieu, K. Kishio
Borocarbides
K. Kitizawa
P. Canfield, R. D. Cava

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

Infrared and Raman Spectroscopy
S. Uchida
M. Cardona, D. van der Marel
Order Parameter Symmetry
R. C. Dynes
A. Goldman, C. Tsuei
Heavy Fermions
H.-R. Ott
F. Steglich
Electronic Properties
B. Batlogg
W. Pickett
Thin Films
T. H. Geballe
J.-P. Locquet, D. P. Norton
Vortex Properties
P. Kes
D. J. Bishop, E. Zeldov
Applications
M. Peter
H. Rietschel, S. Wolf

Statistics in Chemistry & Chemical Engineering

New Hampton School
New Hampton, NH

B. M. Wise, chair
A. Smilde, vice chair

30 July — 4 August

S. de Jong, K. Esbensen, I. Frank, A. Harper, S. Leurgans, G. F Piepel, M. Piovoso, R. T. Ross, P. D. Sampson, R. Tobias, L. Ungar

Supramolecules and Assemblies, Chemistry of

New England College
Henniker, NH

D. A. Tirrell, chair
L. S. Romsted, vice chair

23 July — 28 July

Supramolecular Chemistry
L. S. Jimenez
R. J. M. Nolte, J. F. Stoddart, F. Vogtle
Surfactant Chemistry
R. A. Moss
D. Jaeger, F. Nome, P. Scrimin
Surfactant Membranes
D. F. O'Brien
M. L. Klein, D. E. Leckband
Aggregate Structure and Dynamics
J. T. Groves
G. Cerichelli, E. Kaler, S. Karaborni
Peptide Assemblies
J. L. Thomas
M. R. Ghadiri, J. K. Whitesell
Polymers
J. E. Trend
J. S. Moore, V. Percec, S. I. Stupp
From Films to Crystals
L. S. Romsted
M. Lahav
Optical Properties
T. Penner
S. Marder, T. J. Marks, D. Robello

Three-D Electron Microscopy of Macromolecules

New Hampton School
New Hampton, NH

A. C. Steven, chair
R. A. Milligan, vice chair

25 June — 30 June

Conformational Changes I: Functional Transitions in Macromolecules
M. Yeager
J. Carrascosa, J. Conway, H. Saibil, T. Wagenknecht
Methodological Advances I: Instrumentation and Imaging
J. Wall
Y. Fujiyoshi, R. Schroeder
Conformational Changes II: Visualization of Time-Resolved Processes
J. Murray
J. Bednar, D. Chretien, K. Hirose, D. Siegel. N. Unwin
Late-Breaking Biological Results
Martin Kessel
Conformational Switches in Membranes and Filaments
K. Taylor
E. Egelman, A. Engel, R. Henderson, T. Wakabayashi
Methodological Advances II: Tomography and Crystallization
B. Carragher
A. Brisson, B. Koster
Electron Crystallography
Bob Glaeser
A. Avila-Sakas, W. Kuhlbrandt, A. Mitra, E. Nogales
Late-Breaking Methodological Developments
Paula Flicker
Visualizations of Interactions
Phoebe Stewart
A. Hoenger, N. Olson, M. Schmid, S. Trachtenberg
Computer Workshop (all week)
Ross Smith and Benes Trus

Viruses and Cells

Tilton School
Tilton, NH

Vincent Racaniello and John Taylor, co-chairs

June 11 — June 16

Pathogenesis
F. Chisari
D. Baltimore, F. Chisari, L. Miller
Immune Response to Virus Infection
R. Ahmed
R. Ahmed, D. Johnson, M. Liu, G. Smith
Virus Recognition and Entry into Cells
P. Bates
P. Bates, M. Kielian, M. Oldstone
Translation
N. Sonenberg
M. Katze, R. Schneider, N. Sonenberg
Processing of Viral Proteins
C. Rice
W. Gibson, C. Rice, R. Swanstrom
Replication
C. Seeger
M. Challberg, T. Kelly, C. Seeger
Interactions with Host Proteins
P. Palese
B. Cullen, J. Luban, P. Palese,
Viral Assembly and Structure
J. Rose
E. Hunter, J. Hogle, J. Rose, M. Rossmann, K. Strebel

Wound Repair

Colby-Sawyer College (S)
New London, NH

G. Grotendorst, chair
T. A. Mustoe, vice chair

2 July — 7 July

Inflammation: "Friend or Foe?"
S. J. Liebovitch
J. Oppenhiem, R. Juliano
Growth Factor Receptors
J. McPherson
X. Wang, S. Werner
Matrix Interactions That Control Cell Behavior
E. Hay
R. Assoian, F. Watt
Proteoglycans as Regulators of Growth and Development
S. Ledbetter
M. Bernfeld, E. Kaldjian
Regeneration Versus Scaring: What Can the Embryo Teach Us?
G. Grotendorst
L. Marsh, K. Lyons
Angiogenesis
G. R. Martin
R. Strieter, A. Passiniti, P. D'Amore
Chronic Human Wounds
Thomas Mustoe
G. Schultz, V. Falanga, W. Parks
Fibrosis "The Dark Side of Repair"
G. R. Martin
Are Wound Cells Special?
J. Davidson
T. Krieg

X-Ray Physics

Plymouth State College (S)
Plymouth, NH

I. Robinson, chair
M. Altarelli, vice chair

30 July — 4 August

Magnetism
P. Carra, D. Gibbs, D. Raoux
Polarization
C. Malgrange, Q. Shen
Inelastic Scattering
C.-C. Kao, E. Isaacs, F. Sette
Resonant Scattering
S. Kikuta, A. Kirfel
The Phase Problem
S. Wilkins, R. Papoular, K. Hümmer & E. Weckert
Biology
G. Phillips, M. Wulff
Surfaces
S. Mochrie, R. Chiarello, J. Woicik
After Dinner Speaker
M. Blume
Microfocus Diffraction
D. Häusermann

Zeolitic and Layered Materials

Plymouth State College (S)
Plymouth, NH

M. E. Davis, chair
C. T. Kresge, vice chair

June 18 — June 23

Synthesis Fundamentals and Products
S. I. Jones
J. Casci, J. Johnson,Y. Nakagawa
Characterization Methods
J. B. Higgins
G. Engelhardt, H. Gies, J. Newsam, M. Pan
Applications
C. Kresge
D. Corbin, A. Corma, P. Dutta, T. Gaffney
Structure and Bonding
G. V. Gibbs
A. Navrotsky, M. O'Keefe, A. Redondo
Zeolites in Space
G. Voecks
New Materials
S. Suib
E. Giannellis, J. Parise

Discussion Leaders are shown in **Bold type**; Speakers, in alphabetical order, are indicated in Regular type; *Topics* are printed in *Italics*

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or

Conference Application, Gordon Research Center, 3071 Route 138, Kingston, RI 02881 USA

Fax: (401) 783-7644 Phone: (401) 783-4011/3372 E-mail: grc@grcmail.grc.uri.edu

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Name of Conference _____ Date of Conference _____

Name _____
First Middle Initial Last

Organization _____

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E-mail _____

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Applicant _____
Guest(s) Adult _____
Child(ren) _____

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❒ Government Agency ❒ Industrial Corporation

Please check: ❒ Chair ❒ Vice Chair ❒ Discussion Leader ❒ Speaker ❒ Poster Presenter ❒ Attendee

IMPORTANT

Previous Conferences Attended: ❒ None ❒ 1-5 ❒ 6-10 ❒ 10+

Your Position? ❒ Graduate Student ❒ Postdoc ❒ Research Scientist
❒ Professor ❒ Research Director ❒ Program Manager ❒ Other _____

Are you personally involved in research activities in the subject area of the Conference? ❒ Yes ❒ No

How many papers have you published during the past 3 years in the subject area of the Conference? _____

You are invited to submit an abstract for a poster presentation at the Conference; many Chairs find abstracts very useful in making decisions concerning admission to their Conferences. **Applications are referred to the Conference Chair in accordance with the established regulations. Following the Chair's acceptance, the registration card will be sent to you. Please complete it and return it immediately with payment of the Fixed Fee.**

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Each member of the Conference agrees to these regulations when registration is accepted.

Signature _____ Date _____

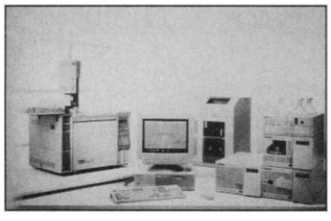
Cycle Sequencing

A new advanced cycle sequencing system is based on ΔTaq version 2.0 DNA polymerase. Unlike Taq polymerase, ΔTaq has no associated 5′-3′ exonuclease activity; this reduces background bands to a minimum, dramatically improving base calling accuracy and readability. The new kit allows sequencing to be performed when low levels of template are available. A two-stage internal labeling and termination protocol is provided, which ensures a higher signal intensity and greater sequence quality, particularly close to the primer. **Amersham Life Science. Circle 140.**

■

Multitechnique ChemStation Software

The Windows-based ChemStation software package is for multitechnique instrument control and data acquisition, analysis, and reporting. The software provides complete control, automation, and data handling for up to four instruments, including the manufacturers' gas chromatograph, liquid chromatograph, and capillary electrophoresis systems. An analog-to-digital interface option is available for acquiring data from non–Hewlett-Packard instruments. **Hewlett-Packard. Circle 141.**



■

Yeast Transformation Kit

FROZEN-EZ is a kit for efficient yeast transformation. The method makes frozen storage of yeast-competent cells possible and is simple compared with previous methods. Yeast-competent cells are prepared in 10 min and can be used directly for transformation or can be stored below −70°C for future use. Freshly prepared or frozen competent cells can be transformed with plasmid DNA in 45 min using a one-solution, one-step protocol. **Zymo Research. Circle 142.**

■

Hapten Labeling and Detection System

The UniTag Hapten Labeling and Detection System is designed to label protein efficiently with the nitroiodophenyl (NIP) hapten, which then serves as a universal protein tag that can be detected easily in immunoassays with a highly specific anti-NIP antibody (rat monoclonal immunoglobulin G) conjugated to horseradish peroxidase (HRP). Labeling, purification, detection, and color development reagents are supplied in one kit. The system offers researchers the option to label several proteins and use the same detection antibody for multiple applications. The Anti-NIP HRP Conjugate provides lower backgrounds and better signal-to-noise ratios than other hapten labeling and detection combinations such as the biotin-streptavidin-HRP–based system. **Promega. Circle 143.**

■

Animal Movement Recorder

EthoVision is a system for automatic recording of activity, movement, and behavioral patterns of animals. Version 1.50 supports the use of color charge-coupled device cameras and frame grabbers, which permits tracking of up to eight animals in a single enclosure. Alternatively, up to eight arenas can be observed with a single camera, a feature that allows automation of large batteries of routine tests. EthoVision can detect various behavior patterns, such as the onset and offset of movement or rearing in rodents, as well as interactions between pairs of animals (approach, avoidance, contact, parallel movement). It has been validated for the following standard behavioral paradigms: Morris water maze learning, open field activity, social interactions, and object recognition. **Noldus Information Technology. Circle 144.**

■

Longer DNA Template Amplification

The TaKaRa LA PCR Kit is designed to overcome problems with polymerase chain reaction (PCR) amplification of DNA fragments greater than 5 kb. By combining an optimized buffer system with TaKaRa's Ex Taq DNA polymerase, the kit provides for routine extension to 20 kb, with up to 40 kb possible. Amplification of large products is demonstrated by the inclusion of a 21-kb control template and specific primers. **PanVera. Circle 145.**

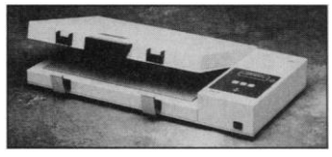
■

T4 RNA Ligase

T4 RNA Ligase has activity on a wide variety of substrates, including RNA, DNA, oligoribonucleotides, oligodeoxynucleotides, and numerous nucleotide derivatives. It can be used to facilitate the synthesis of full-length complementary DNA by ligation of oligonucleotides to the 5′ or 3′ ends of transcripts, allowing amplification of the entire transcript. The enzyme can also be used for 5′ and 3′ end mapping and sequencing of RNAs, for intra- and intermolecular RNA ligations, and in the construction of unique RNA- and DNA-containing oligonucleotides. **Epicentre Technologies. Circle 146.**

Tabletop Incubator

The DTI-1 Tabletop Incubator is designed for laboratory procedures that require a controlled temperature and humidity environment such as in situ hybridization, immunohistochemical staining, and microplate applications. The unit has a temperature range of 20° to 105°C adjustable in increments of 0.1°C. The internal temperature sensor and digital display continually exhibit the temperature of the heating chamber. The unit can be used for both prolonged and short incubation steps. **Digene Diagnostics. Circle 147.**



■

Literature

Chirex: The Innovative Direction in Chiral Separations is a 70-page guidebook that introduces the concepts of chirality and chiral separations by high-performance liquid chromatography, and explores in detail column selection and method development. **Phenomenex. Circle 148.**

FACSCount White Paper presents the results of clinical studies comparing conventional CD4 counting methodology with the FACSCount System for counting CD4, CD8, and CD3 T lymphocytes. **Becton Dickinson Immunocytometry Systems. Circle 149.**

Owl Scientific 1994–95 Catalog contains a complete line of innovative electrophoresis equipment and supplies for DNA, RNA, and protein separations, including horizontal gel systems with built-in casting, leak-proof acrylamide gel casting, and buffer-backed sequencing systems that hold temperatures longer for double and triple loadings. **Owl Scientific. Circle 150.**

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MICROBIAL FOOD SAFETY

The Department of Food Science, University of Massachusetts/Amherst invites applications from qualified individuals to fill a **TENURE-TRACK POSITION** approximately two-thirds research, one-third teaching. The successful candidate will develop a research program in the area of molecular aspects of food microbiology/microbial food safety (especially in the area of pathogen detection), teach food microbiology as well as other undergraduate and graduate courses, advise students, and support departmental initiatives.

A Ph.D. in Food Science, Microbiology, Molecular and Cell Biology, or a closely related field is required. Further evidence of scholarly accomplishments is desirable; an ability to sustain a research program with external funding is expected. Active participation in the University's Biotechnology Program and in its Molecular and Cell Biology Program is encouraged. Salary is competitive and commensurate with qualifications and experience.

Priority will be given to applications received by April 1, 1995, but the search will remain open until the position is filled. Applicants should submit a letter of application, transcripts, résumé, and the names, addresses, and telephone numbers of three references to:

Dr. R. Labbe, Chair, Search Committee
Department of Food Science
University of Massachusetts, Amherst, MA 01003

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FACULTY POSITIONS
Cornell University Medical College
Department of Pharmacology

Candidates are sought for tenure-track positions at the level of **ASSISTANT PROFESSOR**. Candidates with interests in a wide range of areas related to the disciplines of pharmacology and clinical pharmacology will be considered. The responsibilities of this position include development of an active, independent research program and participation in both medical and graduate student teaching programs in the department. Applicants should send a curriculum vitae, a summary of proposed research, and should arrange to have letters sent from at least three scientists who can evaluate the candidate's accomplishments. Cornell University Medical College is a part of the New York Hospital–Cornell Medical Center and is adjacent to Memorial Sloan Kettering Cancer Center and Rockefeller University. Applications should be sent to: **Chair, Pharmacology Search Committee, c/o Room E-409, Pharmacology Department, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.** *An Equal Employment Opportunity/Affirmative Action Employer/Minority/Female/Disabled/Veterans.*

ASSISTANT PROFESSOR
HUMAN NUTRITION
TEXAS A&M UNIVERSITY

Twelve-month, **TENURE-TRACK POSITION** to teach and conduct research in Human Nutrition (60% Research, 40% Teaching). Research program related to diet and disease at the cellular and/or molecular level. Teaching of one course per semester at either the graduate or undergraduate level. Requires Ph.D.; two years of postdoctoral experience preferred. Applications must be received by April 15, 1995. Send letter of application, one-page statement of career goals, a curriculum vitae, and three names of references to: **Dr. Joanne R. Lupton, 218 Kleberg, Texas A&M University, College Station, TX 77843-2471.** *An Equal Employment Opportunity/Affirmative Action Employer.*

Biopsychologist: The Department of Psychology at Boston University plans an appointment of a Biopsychologist beginning fall 1995. The department is seeking an individual with an interest in either the plasticity of the nervous system or the biological bases of learning and memory. The department seeks candidates with demonstrated excellence in research and teaching. The appointment will be at the **ASSISTANT PROFESSOR** level. Applications must be received by March 15, 1995. Send letter of teaching and research interests, curriculum vitae, representative reprints, and three letters of recommendation to the **Chair, Biopsychology Search Committee, Psychology Department, Boston University, 64 Cummington Street, Boston, MA 02215.** *Boston University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR
Avian Wildlife Ecology and Management

Tenure-track, academic-year position in University of Rhode Island Department of Natural Resources Science. To begin July 1, 1995, or soon thereafter. Will teach principles of wildlife management, wetland wildlife management (alternate years), avian ecology or some aspect of conservation biology (alternate years), and a graduate course in person's specialty. To conduct applied research on avian ecology in a coastal urbanizing landscape. Advising undergraduate and graduate students. Ph.D. in wildlife ecology or management with an emphasis on conservation biology required. Demonstrated ability to develop a vigorous, extramurally funded research program and to publish in referred journals required. Postdoctoral experience and proven ability to interact effectively with resource management agencies highly desirable. University teaching experience preferred. Submit letter of application, curriculum vitae, statements of teaching philosophy and research direction, official transcipts, and three letters of reference by April 15, 1995, to: **Dr. Francis Golet, Search Committee Chair, (Log No. 191132), University of Rhode Island, P.O. Box G, Kingston, RI 02881.** *The University of Rhode Island is an Affirmative Action/Equal Employment Opportunity Employer, and is committed to increasing the diversity of its faculty, staff, and students. People from underrepresented groups are encouraged to apply.*

MICROBIAL PHYSIOLOGIST

The Department of Biological Sciences of SUNY Plattsburgh invites applications for a tenure-track, **ASSISTANT PROFESSOR** position for the fall of 1995. A Ph.D. with a strong background in microbiology is required. Postdoctoral experience is not required. The successful candidate will teach courses in general microbiology, and microbial physiology and will be qualified to participate in other microbiology courses. The development of a research program that actively involves undergraduates is expected. The candidate must be committed to excellence in teaching in an undergraduate liberal arts college with an understanding of, and sensitivity to minority and gender concerns. (Opportunities exist to participate in summer science programs for high school students.) SUNY Plattsburgh is located in one of the most beautiful regions of upstate New York, near Lake Champlain, and is one hour by car from Lake Placid, Burlington, Vermont, and Montreal, Canada. New York City and Boston are easily accessible by air, train or interstate highways. Applicants should send a résumé, three recommendation letters, a statement of teaching philosophy, and a summary of potential research to: **Chair, Search Committee, c/o Office of Personnel, SUNY Plattsburgh, Search No. 1916-246, Plattsburgh, NY 12901.** Closing date is March 15, 1995, or until position is filled. *SUNY is an Equal Opportunity/Affirmative Action Employer. Underrepresented women and racial minority scientists are especially encouraged to apply.*

ASSISTANT PROFESSOR—Human Anatomy, Department of Biomedical Sciences, Southwest Missouri State University. Tenure-track position to teach courses in human anatomy, August 1995. Earned doctorate with training and experience in human anatomy, preferably with cadavers; commitment to teaching excellence and research. Alternate areas of expertise considered in selection. Screening begins March 15, 1995, and continues until position is filled. Send letter of application detailing qualifications and professional goals along with curriculum vitae, three reference letters, and all transcripts to: **Albert R. Gordon, Ph.D., Department of Biomedical Sciences, SMSU, Springfield, MO 65804-0094. Voice: 417-836-5730; FAX: 417-836-5588.** *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR
Science and Mathematics Education

Candidates should have an extensive background in science and mathematics, proven ability as an educator of teachers, and the skill needed to develop a dynamic new science and mathematics education curriculum. Review of applications will begin immediately and continue until the positions are filled. Appointment begins September 1995. Send letter of application, curriculum vitae, and at least three letters of recommendation to: **Jeffrey Kane, Dean, School of Education, Adelphi University, South Avenue, Garden City, NY 11530.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FRED HUTCHINSON CANCER RESEARCH CENTER

FACULTY POSITION
DIVISION OF BASIC SCIENCES

The Division of Basic Sciences of the Fred Hutchinson Cancer Research Center (FHCRC) is soliciting applications to fill an open **FACULTY POSITION**. Depending upon the qualifications of the successful applicant, the level of the appointment may be at either the Assistant, Associate or Full Member level. Applicants with demonstrated research competence in any field of modern molecular and cellular biology will be considered. Applications for appointment at the Assistant and Associate Member levels will be received until March 1, 1995. Applications at the Full Member level will be received until the position is filled. Candidates should send a curriculum vitae, a concise statement of their research plans, and three letters of reference to: **New Staff Committee, Fred Hutchinson Cancer Research Center, Division of Basic Sciences, B1-030, 1124 Columbia Street, Seattle, WA 98104.** *FHCRC is an Equal Opportunity Employer committed to work force diversity and provides a smoke-free environment.*

FACULTY POSITION
VIROLOGIST/IMMUNOLOGIST

Johns Hopkins University School of Public Health has an **ASSISTANT** or **ASSOCIATE PROFESSOR** opening for an M.D. or Ph.D. scientist with research interests and experience in evaluating humoral/mucosal immunological responses to and correlates of protection conferred by virus vaccines. Candidates must have demonstrated excellence in independent research. The successful candidate would join a faculty active in research on the development of vaccines to protect against respiratory viruses and other mucosal pathogens. This position involves the conduct of independent and collaborative research, and teaching and training graduate students in the Departments of International Health (Division of Vaccine Sciences) and Molecular Microbiology and Immunology. Send letter of application, including current and future research plans, curriculum vitae and names and addresses of three references to: **Mary Lou Clements, M.D., M.P.H., Director, Johns Hopkins University Center for Immunization Research, Room 125, 624 North Broadway, Baltimore, MD 21205. Telephone: 410-955-4376. FAX: 410-550-6898.**

ASSISTANT PROFESSOR, Molecular Fish Genetics and Populations Genetics—Department of Fisheries and Allied Aquacultures, Auburn University, Alabama. Tenure-track, 12-month appointment (research 75% and teaching 25%). Earned Ph.D. in molecular genetics. Demonstrated ability to isolate, clone and sequence genes; to produce fusion gene constructs, study gene expression and appropriate protein analyses; to conduct mtDNA, DNA fingerprinting and isozyme analysis. Karyotyping and other chromosomal manipulations desirable. Advise graduate students. Salary negotiable, commensurate with experience and qualifications. Send letter stating professional goals, résumé, and names and addresses of three references to: **Dr. Rex Dunham, 121-A Swingle Hall, Auburn University, AL 36849-5419** by February 15, 1995. **Telephone: 205-844-4786; FAX: 205-844-9208.** *Auburn University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

Chemistry faculty: **ASSISTANT** or **ASSOCIATE PROFESSOR,** begin August 28, 1995. Teach lecture, laboratory sections in undergraduate pharmacology and organic chemistry; direct undergraduate research. Requires successful experience or documented potential for excellent teaching, Ph.D. with expertise in pharmacology and organic chemistry. Résumé, undergraduate and graduate transcripts, three original letters of recommendation to: **Dr. C. R. Kistner, Chair, Department of Chemistry, University of Wisconsin-La Crosse, La Crosse, WI 54601.** All material must be received by March 1, 1995. All positions contingent on funding. Names of applicants who have not requested confidentiality in writing, and all finalists, must be released on request. *Women and minorities encouraged to apply. An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR IMMUNOLOGY
JUNIOR OR SENIOR FACULTY

The Department of Microbiology and Immunology invites applications for a junior or senior level, **TENURE-TRACK POSITION** for an immunologist whose research interests are directed to molecular and/or cellular analyses of contemporary problems in immunology. Senior candidates should have strong records of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop high quality, extramurally funded independent research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. The Department offers a high quality, interactive intellectual environment with 80% of the faculty holding active extramural research grants.

A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for: oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, DNA sequencing, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive.

Review of applications will continue until the position is filled. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals and three letters of reference to be sent to:

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

The University of Tennessee, Memphis is an Equal Employment Opportunity/Title IX/Section 504/ADA Employer.

UNIVERSITY OF MAINE AT MACHIAS
Seeking Assistant Professor of Marine Ecology
Full-Time, Regular, Tenure-Track Position

To begin September 1, 1995. The position carries a 50% teaching (12 credit hours/year) and 50% research load. Teaching assignments will support needs of the Division in areas such as: Marine Biology, Aquaculture, Environmental Studies, and Biostatistics.

The successful candidate will be expected to establish an externally funded research program in applied marine biology in the Gulf of Maine. Inclusion of University of Maine at Machias undergraduate students, as much as possible, in ongoing research projects will also be expected.

Requisites include a Ph.D., demonstrated teaching skills, and sensitivity to the needs of students with a variety of skill levels, backgrounds, and ages.

Send letter of application, curriculum vitae, transcripts, three letters of recommendation and address to: **Dr. Alan J. Lewis, Chairman, Division of Sciences, University of Maine at Machias, 9 O'Brien Avenue, Machias, ME 04654.** Application deadline: March 15, 1995.

The University of Maine at Machias is a 1,000 student, independently accredited campus within the University of Maine System offering undergraduate degrees in education, liberal arts, science and business. *The University of Maine at Machias is an Equal Opportunity/Affirmative Action Employer.*

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR,** non-tenure-track. Candidate must be a Ph.D. with interest and some experience in research related to sleep disorders and ability to attract extramural support. Please send curriculum vitae and letter to: **Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *An Equal Opportunity/Affirmative Action Employer.*

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR,** non-tenure-track. Candidate must be a Ph.D. with fellowship training in neuroscience/neurobiology and research interest in mammalian circadian rhythms. Please send letter and curriculum vitae to: **Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR, Department of Food Science, College of Agricultural Sciences, Penn State: The Department of Food Science seeks applicants for the position of Assistant Professor of Food Science with an emphasis on the physical chemistry of foods. This 12-month, tenure-track position has a 40% teaching and 60% research responsibility. The individual will be expected to maintain a research program focused on the physical chemistry of food lipids. The teaching component consists of one undergraduate course in food chemistry, one graduate-level course, undergraduate and graduate advising. Applicants must have an earned doctorate in food science, chemistry, physical chemistry or biochemistry, with an interest in lipids. Postdoctoral or industrial experience is highly desirable. A competitive salary, commensurate with qualifications and experience, and including an attractive benefits package is available. The closing date for applications is April 15, 1995, or until a suitable candidate is found. Anticipated starting date July 1, 1995, or as negotiated. Applicants should submit a letter of application, résumé, academic transcripts, and the names and addresses of three professional references to: **Dr. Gregory R. Ziegler, 111D Borland Lab, Penn State University, University Park, PA 16802.** *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

Nematode Taxonomist/Systematist (Position No. VL94-08). Available July 1, 1995, a **TENURE-TRACK POSITION** within the professorial ladder-rank series. Preference will be given to applicants at the assistant/associate level. Research, teaching, and student advising responsibilities in the areas of nematode taxonomy and systematics. The appointee will conduct research on the taxonomic and phylogenetic relationships of nematodes utilizing comparative morphology and molecular biology. A Ph.D. degree, with broad training in systematics, and experience in nematode systematics/taxonomy/morphology are required, with a record of research productivity. Application deadline: April 15, 1995. Send curriculum vitae, statement of research and teaching interests relative to this position, official undergraduate and graduate transcripts, reprints of relevant publications and submitted manuscripts, names and addresses of at least three references to: **Dr. Howard Ferris, Search Committee Chair, Department of Nematology, University of California, Davis, CA 95616 USA. Telephone: 916-752-8432; Email: hferris@ucdavis.edu.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

SENIOR FACULTY POSITION
ALBERT EINSTEIN COLLEGE OF MEDICINE

The Department of Anatomy and Structural Biology at the Albert Einstein College of Medicine of Yeshiva University is recruiting an outstanding cell biologist for a **SENIOR FACULTY POSITION** in our new Golding building. Candidates should have a continuing record of research excellence. Candidates with special interests in protein trafficking, cellular signal transduction, epithelial cellular polarity, motor molecules of the cytoskeleton and membrane fusion, are particularly encouraged to apply. Applications will be considered for a tenure or tenure-track position at the Associate or full Professor level.

Candidates should send a curriculum vitae, brief description of research interests, and names and addresses of three references to: **Dr. Peter Satir, Chairman, Department of Anatomy and Structural Biology, Albert Einstein College of Medicine of Yeshiva University, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.** *Albert Einstein College is an Equal Opportunity Employer.*

HUMAN GENETICS DEPARTMENT
UNIVERSITY OF UTAH
FACULTY POSITIONS
TENURE-TRACK – ANY LEVEL

Current faculty interests include: Genetics of Human Disease; Developmental Genetics; Human Genome Project; Molecular Genetics of Gene Regulation; and Population Genetics. Send curriculum vitae and brief description of research interests to: **Raymond F. Gesteland, Department of Human Genetics, University of Utah School of Medicine, Salt Lake City, UT 84112. FAX: 801-585-3910.** *The University of Utah is an Equal Employment Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

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SENIOR SCIENTIST- Allergy

As a key member of our Allergy Group, you will direct the activities of a Biological Research laboratory to include the supervision of two Research Scientists. To qualify, you need a PhD in Pharmacology or Physiology and 2-4 years of postdoctoral experience in pharmacology. Expertise in animal models of cough and obstructive diseases of the airways a must. Pulmonary pharmacology and/or neuropharmacological background and pharmaceutical research experience desirable. Excellent interpersonal, supervisory and communication skills essential. For consideration, please respond to: Dept. DD95-02.

ASSOCIATE & ASSISTANT SCIENTISTS- Tumor Biology

Excellent opportunities for highly motivated team players to join our Department of Tumor Biology. Positions require at least 1 year of laboratory experience with proven experience handling animals, IV and IP drug dosing, as well as solid knowledge of cell culture techniques. Familiarity with cell or molecular biology techniques desirable. Candidates for ASSOCIATE SCIENTIST need a BS in Biological Science and 4-7 years of experience or an MS and 2-4 years of experience; and should respond to Dept. DD94-31. Candidates for ASSISTANT SCIENTIST need a BS in Biological Science and 2-4 years of experience or an MS and 0-2 years of experience; and should respond to Dept. DD94-34.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to forward a resume, indicating the Dept. Code for your position of interest and salary requirements to: Human Resources-BG, Schering-Plough Research Institute, K-15/MS 1255, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539.
We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*

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Since opening our doors back in 1980, Genetics Institute has discovered a prodigious number of novel regulatory proteins. To date, nine of these have advanced to human clinical evaluation or commercialization, and the outlook for continued innovation is unprecedented.

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So when you consider why you chose the sciences, consider Genetics Institute. Make an impact.

STAFF SCIENTIST
Developmental Biology

Identify and characterize secreted factors directing the differentiation of pluripotential embryonic stem cells. Also recognize the developmental potential of ES cells under various *in vitro* and *in vivo* conditions, and assay development for assigning biological activities to novel cytokines. Requires a PhD with 2+ years' work experience in developmental biology/related field; a strong background in developmental/cell biology; and technical skills in tissue culture emphasizing morphological data collection and analysis, immunohistochemistry, assay development, microscopy and microphotography. Effective communication, organization, analytical, prioritization and PC skills also needed. Molecular biology background with knowledge of embryo manipulations and microdissection techniques a strong plus.

For consideration, please send or fax resume to: Job Code 95-C528-SCI, Human Resources Department, Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140. Fax: (617) 876-8847.

Genetics Institute offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k) stock purchase plan, relocation assistance, tuition assistance, and an on-site exercise facility. Genetics Institute is dedicated to building strength through diversity.

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National Institutes of Health
National Institute on Aging
Gerontology Research Center
Baltimore, Maryland

TWO POST-DOCTORAL POSITIONS

are available January, 1995 for Ph.D. or M.D. candidates in the Laboratory of Biological Chemistry to study:

(1) expression of tumor extracellular matrix and suppressor genes in aged mice, and the regulation of tumor growth by aged cells.

(2) cellular mechanisms in neovascularization and the analysis of angiogenesis inhibitors as potential anti-tumor agents. Both projects will focus on the cellular signal transduction mechanisms involved in the regulation of tumor growth and angiogenesis during aging. Experience in cell/molecular biology and an interest in cancer research and diseases of aging are preferred. Positions are renewable up to 3 years. Submit curriculum vitae, summary of research interests, and names of three references to:

Dr. A. Passaniti
National Institute on Aging
Gerontology Research Center
4940 Eastern Avenue
Baltimore, MD 21224

NIH is an Equal Opportunity Employer

POSITIONS OPEN

BEHAVIORAL BIOLOGY
SCRIPPS INSTITUTION OF OCEANOGRAPHY

Applications are invited for a faculty position at the **ASSISTANT, ASSOCIATE** or full **PROFESSOR** level in the broad area of behavioral biology. The specific area of research is open and may include cell and molecular, physiological, and/or ecological and evolutionary approaches to analysis of the behavior of marine organisms. The level of this tenure-track (or tenured) appointment is open; exact rank and salary will be commensurate with qualifications and experience in accordance with University of California academic policy and pay scales. Applicants must show evidence of excellence and independence in research as demonstrated by their publication record and letters of reference and will be expected to maintain a strong extramurally funded research program. The position will involve teaching and research supervision at the graduate level with some opportunity for undergraduate instruction. Applicants must hold a doctoral degree at the time of appointment. Applications should include a detailed résumé with a description of research and teaching interests and plans, publication list, and the names and addresses of at least three references to: **Chair, Behavioral Biology Search, Scripps Graduate Department, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0208** by March 31, 1995. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

ENVIRONMENTAL SCIENCE
TENURE-TRACK FACULTY POSITION

To support its new applied M.S. in Environmental Science, Christopher Newport University seeks an environmental scientist capable of teaching graduate courses in practice-oriented biometry and environmental assessment, and with successful experience in writing proposals, assessment documents and mitigation plans. In addition to normal teaching assignments, responsibilities will include developing a research program for undergraduate and graduate students, and creating an environmental advisory service. Practical experience in environmental assessment and mitigation is highly desirable. The position will begin fall 1995.

Christopher Newport University is Virginia's newest public university. It is located near the James River and 20 minutes from Chesapeake Bay. Nearby institutions with research programs in environmental science include the Virginia Institute for Marine Science and the NASA-Langley Research Center.

The successful applicant must have a Ph.D. in an appropriate field, effective English language skills and demonstrated research and teaching abilities.

Send a curriculum vitae, statement of research and teaching interests, copies of graduate transcripts and three letters of reference to: **Professor Gary Whiting, Biology, Chemistry, and Environmental Science, CNU, 50 Shoe Lane, Newport News, VA 23606. Email: gwhiting@powhatan.cc.cnu.edu. FAX: 804-594-7919.** The above materials must be received by 5:00 p.m. on March 22, 1995. *Christopher Newport University hires only U.S. citizens and aliens lawfully authorized to work in the United States. Applications from women and minorities are encouraged. An Equal Employment Opportunity/Affirmative Action Employer.*

VISITING INSTRUCTOR IN BIOLOGY

The Department of Biology at Davidson College is seeking applications for a two-year **VISITING INSTRUCTOR** position. The Instructor will teach introductory biology. Ph.D. or ABD in Biology, and experience teaching undergraduates required. The appointment will begin on August 1, 1995. Contract may be renewed for a third year. Interested persons should send their curriculum vitae, a teaching statement and three letters of reference to: **Dr. Verna Miller Case, Department of Biology, Davidson College, P.O. Box 1719, Davidson, NC 28036** by March 17, 1995. *An Equal Opportunity Employer; women and minorities encouraged to apply.*

Department of Psychiatry, University of Pennsylvania, has two **FACULTY POSITIONS** available for program in neurobiology and behavior. Positions are at either the junior or senior level depending on candidates' qualifications. Candidates must be M.D., Ph.D. with training in genetics and experience in endocrinology, molecular pharmacology and neuroanatomy. Please send letter of intent and curriculum vitae to: **Peter C. Whybrow, M.D., Chairman, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *Equal Opportunity/Affirmative Action Employer.*

ENDOWED PROFESSORSHIP
INSTITUTE DIRECTOR

Southwest Texas State University is seeking an internationally recognized scientist, as an **ASSOCIATE** or **FULL PROFESSOR**, to establish a nationally competitive Institute for Environmental and Industrial Science within the Department of Chemistry. The successful candidate should have demonstrated success in handling research and development projects and an ability to conduct interdisciplinary research in the chemical sciences. Of particular interest is the potential of the director to develop scientific relationships with regional industries. In addition to scientific credentials, expertise in organization, program development, team leadership, proposal preparation and project management will be essential. This is an outstanding opportunity to lead a new program and shape its development, including design of new laboratory space and cooperative interdisciplinary projects within and beyond the University. Review of applications will begin on March 1, 1995, and continue until the position is filled. Please send a complete résumé to: **Dr. Patrick E. Cassidy, Associate Vice President for Academic Affairs, Institute for Environmental and Industrial Science, Southwest Texas State University, San Marcos, TX 78666. Telephone: 512-245-2205.**

Southwest Texas State University is an Equal Opportunity Employer.

DIRECTOR: TRANSGENIC ANIMAL FACILITY
UNIVERSITY OF ROCHESTER
School of Medicine and Dentistry

Applications are invited for a **DIRECTOR** to establish a rodent transgenic core facility in the School of Medicine and Dentistry, University of Rochester, New York. The successful candidate will have demonstrated experience in the generation of transgenic animals using DNA microinjection and ES cell-based technology and related technologies, and will have a record of successful collaboration with other investigators. The director will be expected to establish and supervise a University-wide core facility. Generous start-up funds are available for personnel, equipment, and day-to-day expenses. The director will be appointed in a tenure-track faculty position and have opportunity to maintain an active research program appropriate to such an appointment. Interested persons should submit a curriculum vitae which includes relevant experience in the construction of transgenic animals, and the names and addresses of three references to: **Dr. Paul L. La Celle, Senior Associate Dean for Academic Affairs and Research, University of Rochester, 601 Elmwood Avenue, Box 706, Rochester, NY 14642-8706.** *The University of Rochester is an Equal Opportunity/Affirmative Action Employer. Women and underrepresented minorities are particularly encouraged to apply.*

DEPARTMENT HEAD/PROFESSOR
MEDICINAL CHEMISTRY
UNIVERSITY OF MINNESOTA

Applications and nominations are invited for the position of **HEAD** and **PROFESSOR** of the Department of Medicinal Chemistry, College of Pharmacy. The department has a strong graduate program with 11 full-time faculty who are engaged in a wide range of research activities. The Department Head is expected to maintain an active research program, provide leadership in curriculum development and graduate research activities, participate in departmental teaching activities, and should have a broad appreciation of all facets of Medicinal Chemistry. The Head is responsible for the day-to-day operation of the department and is expected to develop and integrate the department's programs in conjunction with other departments in the College and in the University.

Applicants must have an earned doctorate in Medicinal Chemistry or a closely related field and be eligible for appointment as a tenured professor. Applicants should have an outstanding record of scholarly achievement and provide evidence of strong leadership, management and interpersonal skills. Academic administrative experience is desirable. Start date is September 16, 1995. Letters of application, with curriculum vitae, a statement of research interests and names of three references should be forwarded by April 15, 1995, to: **Professor Patrick E. Hanna, University of Minnesota, Department of Medicinal Chemistry, 308 Harvard Street SE, Minneapolis, MN 55455.**

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

DIRECTOR
PITTSBURGH GENETICS INSTITUTE

The University of Pittsburgh and the University of Pittsburgh Medical Center are seeking candidates for the position of **DIRECTOR** of the Pittsburgh Genetics Institute (PGI). The PGI is a multidisciplinary program that involves the sponsoring institutions and several affiliated hospitals and collaborating universities. The PGI is designed to integrate and provide focus to diverse activities in genetics research, education, clinical services, counseling and community outreach. The primary, but not exclusive, focus of the PGI is in the area of human genetics.

The successful candidate should be an M.D., M.D./Ph.D. or Ph.D. investigator with exhibited national leadership in basic and/or clinical research. Administrative experience and the ability to lead and interact effectively among clinical, training and genetic counseling programs and the community are essential attributes. The sponsoring institutions are prepared to commit substantial resources to this recruitment including competitive personal compensation and start-up resources for the Director, faculty slots and research space, in addition to funds for program initiatives. Inquiries should be directed to:

Edward J. Benz, Jr., M.D.
Jack D. Myers Professor and Chairman
Department of Medicine
University of Pittsburgh School of Medicine
3550 Terrace Street
Pittsburgh, PA 15261
c/o Nancy Paulsen

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

DIRECTOR
University of Nebraska State Museum

University of Nebraska-Lincoln (UNL) invites applications and nominations for **DIRECTOR**, University of Nebraska State Museum. Successful candidate will have leadership and fiscal responsibility in furthering the mission of the Museum in research, teaching, and public service. Candidates must have doctorate in science or other appropriate academic discipline, have a record of scholarly achievement and experience in management and administration, and faculty credentials consistent with those of a tenured full professor. Director responsible for vigorous pursuit of extramural funding to support Museum research and public outreach and for developing statewide support. Screening of applications begins March 15, 1995. Those interested should send a letter of interest, curriculum vitae and the names and addresses of five references. References will not be contacted without candidate's approval. Send nominations and applications to: **Professor R. Hames, Chair UNL State Museum Director Search Committee, 302 Administration Building, University of Nebraska-Lincoln, Lincoln, NE 68588-0433. Telephone: 402-472-2411; FAX: 402-472-9642.** *The UNL is committed to a pluralistic campus community through Affirmative Action and Equal Opportunity and is responsive to the needs of dual career couples. We assure reasonable accommodation under the ADA.*

FACULTY POSITION: The Sackler Faculty of Medicine, Tel-Aviv University, seeks candidates for a tenure-track teaching and research position in the Department of Pathology. Applicants should have an M.D. degree, and at least three years of postdoctoral research experience. Preference will be given to candidates who have both M.D. and Ph.D. degrees, with research interests in the various fields of molecular pathology. The Department offers opportunity for collaborative research with institutes of pathology in seven affiliated hospitals.

Applicants should submit curriculum vitae, a short synopsis of research plans and three letters of recommendation. Applications and letters of recommendation should be sent by March 30, 1995, to: **Dean, Sackler Faculty of Medicine, Tel-Aviv University, Ramat-Aviv 69978, Tel-Aviv, Israel.**

ASSSISTANT/ASSOCIATE/FULL PROFESSOR of Pharmacology. Scientist with interest in neuroscience and molecular biology preferably with experience in transgenic methodology is sought for a tenure-track position. Send nomination/applications including curriculum vitae, a statement of research goals and teaching interest and names of three references by May 1, 1995, to: **Search Committee, Department of Pharmacology, University of North Texas, Health Science Center at Fort Worth, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107.**

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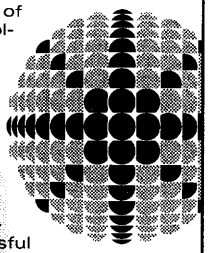

Scientist/Sr. Scientist Research

We are seeking a medicinal chemist or synthetic organic chemist with a working knowledge of structure-function analysis of bioactive molecules. Experience with lipid- and peptide chemistry is also highly desirable. The successful candidate will be an enthusiastic, independent-thinking, productive scientist with1-8 years' post-doctoral and/or industrial experience in one or more of the areas listed above.

Scientist-Membrane Research

We have several positions available for scientists possessing experience with liposome-drug interactions and liposome design, as well as physical and chemical characterization of lipid vessels. Successful candidates will be critically involved throughout drug development, especially during formulation, biophysical and chemical characterization. PhD in Biochemistry, Biophysics or Chemistry and 0-5 years' postdoctoral experience is essential. Technical expertise should include HPLC purification, DSC, NMR, fluorescence spectroscopy and other chemical-physical techniques used in liposome characterization. The ability to work with a team of professionals supporting a drug throughout its development is necessary.

We offer a competitive salary and comprehensive benefits package. Send resume, indicating position of interest, to: **The Liposome Company, Human Resources Department, One Research Way, Princeton, NJ 08540.** We are an Equal Opportunity Employer.

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SmithKline Beecham is a $9.2 billion global pharmaceutical and healthcare company. Our world famous products and reputation mean unsurpassed opportunities for individuals to combine their scientific and marketing expertise as Medical Associates.

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To qualify, you must have a Pharm.D. or Ph.D in Pharmacology. Strong marketing and communication skills and a high degree of initiative are also required. Currently several openings exist throughout the U.S.

We offer one of the best compensation packages-including a car - in the industry. If you'd like to be a part of our success, send your resume with salary history to: SmithKline Beecham, Central Employment, Reference # 001C095, 200 North 16th Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/D/V.

SB **SmithKline Beecham**

Director
Institute for Advanced Studies in Biological Process Technology
University of Minnesota

The University of Minnesota seeks a Director for the Institute for Advanced Studies in Biological Process Technology (BPTI). This interdisciplinary research center consists of faculty members from the College of Biological Sciences, The College of Agriculture, The Institute of Technology and the Medical School, and includes a fermentation pilot facility to carry out a wide range of bioprocess scale-up research. BPTI draws students through excellent graduate programs in Microbiology, Biochemistry, Molecular, Cell and Developmental Biology and Genetics, Chemical Engineering and other related disciplines. The Director establishes the mission and vision of the Institute, manages the budget and interacts with the biotechnology industry as part of the University's outreach mission. The Director will lead a research program individually and will stimulate collaborative research in the multidisciplinary environment of BPTI. The Institute reports to the University Administration through the Dean of the College of Biological Sciences. The ideal candidate for Director will have a distinguished professional record with substantial experience in research or research management. The Director should be experienced in working at the interface between biology and engineering and capable of stimulating collaboration and interaction across this spectrum of fields. Appointment will be at the full Professor level. Send applications with resume and a list of at least three references by March 15, 1995 to Professor Matthew Tirrell, Chair, BPTI Search Committee, Department of Chemical Engineering and Materials Science, University of Minnesota, 421 Washington Avenue, S.E., Minnepolis, MN 55455.

The University of Minnesota is an equal opportunity educator and employer.

Natural History Museum of Los Angeles County

Head of Research and Collections

The Natural History Museum of Los Angeles County comprises five separate institutions of natural and cultural history. In size, diversity, quality, and significance, its collections are among the strongest in the world. The Museum operates under new leadership and under a new strategic plan in which research and collections are key. The Museum seeks a Head of Research and Collections to lead its curatorial staff.

The Head should have a distinguished record of scholarship and be able to explain and support the importance of collections to many audiences. He or she should be able to secure outside funding for research and collections, to implement new partnerships, and to work with the Museum's exhibits and education departments to achieve effective and integrated programs. Evidence of administrative skills and leadership ability is essential.

Send letters of application or nomination to **Dr. James Powell, President and Director, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007 (fax: 213-746-7538).** *Equal Opportunity Employer.*

POSTDOCTORAL POSITION available in the Laboratory of Chemical Physics, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health. Research topics include **(1)** the development of new solid state NMR methods for the structural characterization of biochemical systems, **(2)** the application of solid state NMR to the determination of protein and peptide structures in frozen solution, in interaction with membrane-bound receptors, and in partially folded states, and **(3)** the investigation of the structural and electronic properties of excited states of organic and biochemical systems through combined optical/NMR spectroscopy. Applicants must have exceptional backgrounds in either NMR or biophysical chemistry and must be less than five years postdoctoral. Send a curriculum vitae, the names and addresses of three references, and a brief summary of doctoral research to: Dr. Robert Tycko, NIH, Building 5, Room 112, 9000 Rockville Pike, Bethesda 20892.

NIH is an Equal Opportunity Employer

POSITIONS OPEN

CHAIR
DEPARTMENT OF MICROBIOLOGY

The University of South Dakota School of Medicine invites nominations and applications for the position of **CHAIR** of the Department of Microbiology. Candidates with a Ph.D. or M.D. degree and research experience in any area of microbiology or immunology are encouraged to apply. The successful candidate must have demonstrated leadership capabilities, a distinguished research record, and a genuine commitment to excellence in medical and graduate education. Initial review of the applications will begin March 15, 1995, and will continue until the position is filled. Candidates should submit a letter of application, curriculum vitae, statement of research interests, and names of at least three references to: **Ronald Lindahl, Ph.D., Chair, Microbiology Search Committee, University of South Dakota School of Medicine, Vermillion, SD 57069-2390.** *Affirmative Action/Equal Opportunity Employer.*

INSTRUCTOR IN PATHOLOGY

The Department of Pathology of the College of Physicians and Surgeons of Columbia University is currently seeking qualified applicants for a position as an **INSTRUCTOR** in Pathology. This position will be responsible for overseeing a molecular diagnostics laboratory specializing in the detection and typing of human papillomavirus. Either an M.D. or Ph.D. is required as are previous experience overseeing a laboratory and extensive research experience in the detection and typing of human papillomavirus using polymerase chain reaction and restriction fragment length polymorphism analysis. Interested candidates should send a curriculum vitae and the names of three references to: **Thomas C. Wright, Jr., M.D., Associate Professor, College of Physicians and Surgeons of Columbia University, Department of Pathology, 630 West 168th Street, New York, NY 10032.** *Columbia University takes Affirmative Action to ensure Equal Opportunity and is particularly interested in applications from women and minorities.*

ACADEMIC OPHTHALMOLOGISTS
INSTRUCTORS

The University of Nebraska College of Medicine, Department of Ophthalmology, is seeking one full-time academic ophthalmologist to serve as an **INSTRUCTOR** for the period July 1, 1995 through June 30, 1996. A retina specialist is desired. A strong commitment to resident and medical student teaching, as well as an interest in research, are essential. Requirements include completion of a satisfactory residency program and prior teaching experience. Send curriculum vitae to: **Michael E. Yablonski, M.D., Ph.D., Professor & Chairman, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-5540.** *An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

INSTITUTE OF MOLECULAR BIOLOGY (IMB)
ACADEMIA SINICA, TAIWAN, ROC

POSTDOCTORAL POSITIONS available immediately to work on gene structure and regulation in normal and disease human cells. Recent Ph.D. with research experience and interests in relevant fields are encouraged to apply. Candidates with a knowledge and techniques of recombinant DNA, protein isolation, protein-DNA interaction, mammalian cell culture, and/or yeast cloning system are preferred, but others are also welcome to apply. Salary $24,000 to $28,500 per annum. Please send curriculum vitae and three letters of reference ASAP by mail or FAX to: **Ms. Fei Chen** at the **Institute of Molecular Biology, Academia Sinica, Nankang, Taipei 115, Taiwan, ROC. FAX: 886-2-782-6085.**

POSTDOCTORAL POSITION available (June 1995) to study the effects of Cystic Fibrosis and Autosomal Dominant Polycystic Kidney Disease on liver biliary cell function and to develop approaches to gene therapy (*Am. J. Physiol.*, **266**:G1060, 1994 and *Gastro.*, **108**:584, 1995) using molecular, biochemical and physiological techniques. Send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. Douglas Jefferson, Tufts University School of Medicine, Department of Physiology, Boston, MA 02111. FAX: 617-636-4233; Email: douglas.jefferson@es.nemc.org.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Two **POSTDOCTORAL POSITIONS** are available for molecular-cellular biologists to study G protein coupled signal transduction pathways in the CNS. The Molecular Pathophysiology Program provides the opportunity to conduct exciting and imaginative cellular and molecular biological research in the investigation of drug and disease induced neuroplasticity changes, and the pathophysiology of neuropsychiatric disorders. Position 1: Post-translational modification of proteins in the CNS. The successful candidate will have a Ph.D. in Biochemistry, Pharmacology or related discipline. Preference will be given to applicants with experience in protein phosphorylation/dephosphorylation, 2-D electrophoresis and lipid biochemistry. Position 2: Neuropharmacology of Gene Expression in the CNS. The successful candidate will have a Ph.D. in Molecular Biology, Neuroscience or related discipline. Preference will be given to applicants with experience in recombinant DNA methodologies and targeted insertion of genes.

Please send full curiculum vitae, brief statement of research interest, plus names and addresses of three references to:

Husseini K. Manji, M.D.
c/o Chairman's Office
Department of Psychiatry and
Behavioral Neurosciences
Wayne State University School of Medicine
9B University Health Center
4201 St. Antoine
Detroit, MI 48201

Wayne State University is an Equal Opportunity/Affirmative Action Employer. All buildings, structures and vehicles at Wayne State University are smoke-free. Wayne State University - People working together to provide quality service.

POSTDOCTORAL POSITION
BIOCHEMISTRY/MOLECULAR BIOLOGY

A position is available immediately to join an ongoing study on the structure and function of endoglycosidases and glycoamidases. The applicant must have a strong background in molecular biology and will be involved in the cloning, sequence analysis, and expression of the enzymes. Site-directed mutagenesis will complement ongoing X-ray crystallographic analysis. The research will be conducted in a well-equipped core facility. Compensation from Health Research Inc. dependent upon experience. Send résumé and three references to: **Dr. Anthony Tarentino/Dr. Thomas H. Plummer Jr., Wadsworth Center for Laboratories and Research, Empire State Plaza, Box 509, Albany, NY 12201.**

POSTDOCTORAL SCIENTIST
Drug Metabolism/Molecular Genetics

Pfizer, a Fortune 100 company and multi-billion dollar industry leader, is focused on discovering and developing innovative pharmaceutical therapies that improve the quality of life around the world.

Your experience in molecular biology and/or characterization of drug metabolizing enzymes, could qualify you for this unique opportunity to study cytochrome P450 enzyme(s) in both a corporate and an academic setting. The selected candidate will spend 18 months with **Dr. James Halpert** at the University of Arizona Health Sciences Center in Tucson, Arizona. This collaborative effort will focus on cloning, expression and enzymatic characterization of novel isoforms of cytochrome P450. The goal of this research is to develop enzyme models in animal species critical to the development of new drug applications. Publication and presentation of data will be encouraged.

In addition to the opportunity to interact with one of the world's finest corporate scientific communities, we offer a competitive salary, medical and dental insurance coverage, travel funds for attending scientific conferences and relocation assistance. For confidential consideration, send your curriculum vitae and the names of three references to: **Mr. David Meyers, Employee Resources, Pfizer Inc., Central Research Division, Eastern Point Road, Groton, CT 06340.**

An Equal Opportunity Employer/Minority/Female/Disabled/Veterans.

POSITIONS OPEN

POSTDOCTORAL POSITION
DEPARTMENT OF NEUROBIOLOGY
THE SCRIPPS RESEARCH INSTITUTE
La Jolla, California

Applications are invited for an immediate position of **POSTDOCTORAL FELLOW** to study mechanisms of neuron-glia interaction and regeneration in the central nervous system, putting emphasis on methods of gene discovery such as subtractive hybridization and on the analysis of cell adhesion molecule (CAM) interactions and signaling. Please submit a curriculum vitae including a statement of research experience/interests and arrange for letters of reference to be sent to: **Kathryn L. Crossin, The Scripps Research Institute, Department of Neurobiology, 10666 North Torrey Pines Road, SBR-14, La Jolla, CA 92037.** *The Scripps Research Institute is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS

Two **POSTDOCTORAL POSITIONS** are available immediately to study the structure-function relationships and regulation of type 1 and type 2A Ser/Thr protein phosphatases. Particular emphasis is placed in studying the role of these enzymes in transmission of growth factor signals which lead to metabolic responses, control of gene expression and cell cycle regulation. Experience in enzymology/cell biology/molecular biology or yeast genetics is required.

Please send curriculum vitae and have three letters of reference forwarded to: **Anna DePaoli-Roach, Ph.D., Department of Biochemistry and Molecular Biology, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, IN 46202. FAX: 317-274-4686; Telephone: 317-274-1585; Email: depaoli-roach@iucc.iupui.edu.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

Three **POSTDOCTORAL POSITIONS** are available immediately to study: a) the mechanism of action of tolerance inducing HLA-derived peptides, b) the role of heat shock protein 70 family members in tumor antigen presentation, and c) the function and transcriptional regulation of the chemoattractant cytokine RANTES. Experience in various aspects of molecular biology, protein chemistry, and/or cellular immunology is required. Applicants should send a complete curriculum vitae and up to three letters of reference to either: **Alan M. Krensky, M.D., Shelagh Galligan Professor, Department of Pediatrics, Stanford University, Stanford, CA 94305-5119. FAX: 415-723-2137;** or **Carol Clayberger, Ph.D., Assistant Professor, Department of Cardiothoracic Surgery, Stanford University, Stanford, CA 94305-5247. FAX: 415-725-3846.** *Stanford University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION
DEPARTMENT OF NEUROBIOLOGY
THE SCRIPPS RESEARCH INSTITUTE
La Jolla, California

Applications are invited for an immediate position of **POSTDOCTORAL FELLOW** to study mechanisms of gene regulation during neural development and regeneration. Studies focus on transient signals which regulate the genes encoding cell adhesion molecules such as homeobox and Pax gene products. Please submit a curriculum vitae including a statement of research experience/interests and arrange for letters of reference to be sent to: **Frederick S. Jones, The Scripps Research Institute, Department of Neurobiology, 10666 North Torrey Pines Road, SBR-14, La Jolla, CA 92037.** *The Scripps Research Institute is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE in tumor biochemistry to study biochemical alterations in cellular membranes and metabolite pathways associated with tumor progression and metastatic potential. Studies of actively metabolizing tissue and cancer cell preparations will use ^{31}P-, ^{13}C-, and ^{1}H-NMR spectroscopy. Experience in HPLC methodology, biochemical analysis and NMR methodology preferred. Please send curriculum vitae and names of three references to: **Samuel Singer, M.D., Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. FAX: 617-739-1728; Telephone: 617-732-6980.**

SCIENCE Special Editorial Focus

10 March 1995

Special Issue: Molecular Biology: Cellular Regulation I

The 10 March issue offers three special advertising opportunities!

- Special molecular biology cover story.

- Bonus distribution to scientists attending the American Association of Cancer Research meeting, 19-21 March in Toronto, Canada.

- Bonus distribution to USGEB (Union of Swiss Societies of Experimental Biology), 30-31 March in Fribourg, Switzerland.

Recruitment Advertising Space Reservation Deadline: 21 February

To advertise, call:
In the U.S., JanisCrowley
phone (212) 496-7704,
fax (202) 682-0816.

In Europe, Gordon Clark
phone (44) 01223 302067,
fax (44) 01223 302068.

SCIENCE

U.S. EPA Office of Research and Development
Biologically-Based Dose Response Models for Developmental Toxicity
Request for Preposals

The U.S. EPA Environmental Protection Agency Office of Health and Environmental Assessment (OHEA) and Health Effects Research Laboratory (HERL) is seeking PREPOSALS FOR FINANCIAL ASSISTANCE BY COOPERATIVE AGREEMENTS with non-profit or not-for-profit research organizations for research on biologically-based dose-response modelling for developmental toxicity. Such agreements require a minimum of 5% cost sharing by the recipient organization. A high degree of collaboration with the EPA researchers involved in these activities is anticipated (e.g., joint planning and conduct of most tasks and co-authored publications).

The primary goal of the project is to conduct research aimed at understanding the fundamental mechanisms of abnormal development and developing mathematical models of mechanism-based dose-response relationships in conjunction with EPA bio-modelers and researchers. Potential focal areas include: (1) segmentation disruption; (2) nucleotide pool imbalances; (3) second/third messenger perturbations. Proposals may address one or more of these areas, or entirely independent and novel areas. Proposals addressing concentration-time (CxT) relationships will be given priority for funding.

Proposals will be evaluated by expert review panels. The review will be based on the proposer's experience with similar research activities, qualifications of the proposed staff and their understanding of appropriate research approaches and technologies, the relevancy to the mission of OHEA, and the cooperative nature of the proposed working arrangement with EPA staff. The applicant's proposed budget will also be considered in the selection process. EPA's yearly share of the resources for the research area is expected to be $170,000 for each of 3 years, and anticipates making one or two awards.

ONLY STATE AND LOCAL GOVERNMENTS, NONPROFIT RESEARCH INSTITUTIONS OF HIGHER EDUCATION, INDIVIDUALS, OR NON-FOR-PROFIT RESEARCH ORGANIZATIONS THAT ARE ELIGIBLE TO RECEIVE FEDERAL ASSISTANCE UNDER THE FOLLOWING ACT SHOULD APPLY: Statute authority for this cooperative agreement is found in the Clean Air Act, 42 U.S.C. §7401/04(a) (2). Interested applicants must be eligible to receive Federal Assistance under the Code of Federal Regulations (CFR) Part 30 General Regulations for Assistance Programs, and Part 40-Research and Demonstration Grants. The government reserves the right to not make awards in the research area described in this solicitation. Additional technical instructions and appropriate application materials will be provided upon request. Technical instructions for preparation of preposals and proposals should be obtained from: Barbara Blackwell, Health Effects Research Laboratory (MD-51), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; Tel 919-541-2886; Fax 919-541-4324. Responses to this advertisement must be received by close of business (COB) March 31, 1995. Responses should be sent to Barbara Blackwell, Health Effects Laboratory (MD-51), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

Dean of the College of Agriculture and Associate Dean of the Minnesota Agricultural Experiment Station
University of Minnesota

The University of Minnesota invites nominations and applications for the position of dean of the College of Agriculture and associate director of the Minnesota Agricultural Experiment Station. The College of Agriculture with its 10 departments, five branch stations and landscape arboretum is a key part of a large land-grant research University that is located in a metropolitan area of 2.2 million people. Minnesota has a high rank nationally in food and agricultural products, a very diverse agricultural base, and is the home for a large number of food processing and horticultural firms. Programs of the college are not only involved with food and agriculture, but also with environmental issues associated with the production, processing, marketing and distribution of food and agricultural products. The college has a comprehensive budget totaling approximately $65 million. The college employs 230 faculty; 330 civil service staff; 120 academic professional and administrative staff; and provides instruction to 900 undergraduate and 425 graduate students. Many of the faculty, departments, and centers are nationally and internationally recognized for the quality and innovation of their disciplinary and interdisciplinary teaching, extension, and research programs.

The dean is the chief executive and academic officer of the College of Agriculture and associate director of the Minnesota Agricultural Experiment Station (MAES). This position has administrative responsibility for collegiate faculty and programs, the recurring station budgets in the college and branch stations, and shared responsibility for state extension specialists integrated into college departments.

Responsibilities include: overall leadership for disciplinary and interdisciplinary teaching, research, and outreach efforts in agriculture; administration of fiscal planning and management; personnel; and collaborative work with students, alumni, staff, faculty, administrators, and external constituencies to facilitate effective delivery of programs. The dean and associate director is the leading champion for the COA in the promotion of mutual understanding of the needs, programs, and accomplishments of the college to the University, the public, and constituency groups. This person will work with the Director of the MN Agricultural Experiment Station to create and sustain the MAES vision and programs, in cooperation with a team of associate directors who represent other colleges that contribute to experiment station programs.

Required qualifications include: An earned doctoral or comparable degree; experience in food, agriculture or environmental sciences; demonstrated record of administrative and leadership experience; demonstrated knowledge of teaching, research, and outreach programs; demonstrated excellence in verbal and written communication; demonstrated commitment to affirmative action, cultural diversity, and equal opportunity for women and minorities; demonstrated ability to work effectively with and/or lead people in a diversity of programs. Desired qualifications include: Demonstrated experience with agricultural, food or environmental research, teaching or outreach within the context of the land-grant mission for domestic and international programs; three years administrative and leadership experience, preferably in an interdisciplinary setting including experience in planning, budgeting, personnel systems, and in recruiting and supervising administrative colleagues; successful career experiences working with constituency groups, donors, advisory committees and/or other boards.

This person will report to the University of Minnesota Provost for Professional Studies and Director of the MN Agricultural Experiment Station. It is a three-year fixed-term academic administrative appointment in the University, subject to review for renewal. Academic rank and tenure is dependent upon qualifications and vote of peer faculty in the appropriate department. Starting date is August 1, 1995. Salary level is commensurate with educational and career experience. The University's attractive fringe benefits program includes participation in a faculty retirement plan, health and dental programs, and life insurance coverage. Nominations for this position must be submitted by March 15, 1995. To be considered for this position, a complete file must be postmarked by April 1, 1995 to: Chair, Search Committee for COA Dean and Associate Dir. MAES, 201 Coffey Hall, 1420 Eckles Ave., St. Paul, MN 55108. A complete file must include a letter of intent and interest that also describes the candidate's qualifications for this position, a current resume or vitae and a list of five references who have already been contacted by the applicant.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Two **POSTDOCTORAL POSITIONS** are available immediately at the Dana-Farber Cancer Institute. The project involves the generation and evaluation of DNA vaccines to prevent retroviral infection and disease. We are seeking an immunologist with special expertise in evaluating cytotoxic T-cell responses. For the second position, we are seeking a molecular biologist with expertise in studying gene expression systems. Send curriculum vitae and names of three references to: **Dr. Ruth M. Ruprecht, Chief, Laboratory of Viral Pathogenesis, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115 USA.** *Dana-Farber Cancer Institute is an affiliate of Harvard Medical School; an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL RESEARCH ASSOCIATE NEUROSCIENCE

A **POSTDOCTORATE** or **RESEARCH ASSOCIATE** position is available in the Neuroscience Program at the Loeb Resource Institute of the Ottawa Civic Hospital, a University of Ottawa affiliate, to participate in peer-reviewed and funded studies of neurotransmitter and peptide receptors, ligand- and voltage-activated conductances and second messenger mechanisms in mammalian CNS neurons controlling autonomic and pituitary function. The Program comprises nine PIs with expertise in molecular and cellular neurobiology applied to exocytosis, membrane trafficking, signal transduction, gene regulation, ion channel function, post-ischemic neuronal function and survival. Requires: M.D. and/or Ph.D. degree; minimum of four years of postdoctorate experience with electrophysiology and neuropharmacology in slice and/or explant preparations; demonstrated ability and productivity (authorship on peer-reviewed publications) with current, voltage- and patch clamp techniques, data analysis and anatomical marking methods. Position is tenable for a minimum of three years, and involves teaching and lab supervision. Salary and benefits commensurate with experience. In accordance with Canadian immigration regulations, this advertisement is directed first, but not solely, to Canadian citizens and permanent residents.

Forward or FAX **(613-761-5360)** curriculum vitae with addresses of three references and a statement of goals/interests/experience by March 31, 1995, to: **Dr. Leo Renaud, Director, Neurology/Neurosciences, Ottawa Civic Hospital and Loeb Research Institute, 1053 Carling Avenue, Ottawa, Ontario, K1Y 4E9 Canada.**

POSTDOCTORAL POSITION available immediately to study the structure and function of ribosomal RNA using an oligonucleotide analog approach (**Purohit and Stern,** *Nature*, **370**: 659, 1994). Ribosomal RNA oligonucleotide analogs are small RNA constructs, derived from functionally implicated subdomains of 16S and 23S rRNA. They participate in significant interactions with antibiotic, mRNA, and tRNA ligands. Send curriculum vitae and letters of reference to: **Dr. Seth Stern, Program in Molecular Medicine, UMASS Medical Center, 373 Plantation Street, Worcester, MA 01605.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS GENE TRANSFER

POSTDOCTORAL POSITIONS are available to study gene transfer and expression *in vitro* and *in vivo* (CNS and lung). A Ph.D. and relevant experience is required. An interest in viral vectors (AAV, adenovirus) and experience with vector delivery to the CNS is desired. Submit curriculum vitae including the names of three references to: **Dr. Philip R. Johnson** or **Dr. Warren Lo, Children's Hospital Research Foundation, Room W309, 700 Children's Drive, Columbus, OH 43205. FAX: 614-722-2716.**

POSTDOCTORAL POSITION in the pharmacology of tumor imaging agents to conduct multidisciplinary research in the development of new radiopharmaceuticals for PET and SPECT imaging. Position requires a Ph.D. in pharmacology or biology; a background in cancer research is preferable. Please send curriculum vitae to: **Dr. Hank F. Kung, Departments of Radiology and Pharmacology, University of Pennsylvania, Room 305, 3700 Market Street, Philadelphia, PA 19104. Email: kunghf@sunmac.spect.upenn.edu.**

POSTDOCTORAL RESEARCH POSITION IN p53-Dependent Stem Cell Regulation

Position available immediately for recent graduates trained in biochemistry, cell biology and molecular biology. Utilization of novel p53-inducible cell lines to investigate the regulation of stem cell division by the antioncogene via a guanine nucleotide-dependent mechanism. Interested graduates should forward curriculum vitae and three letters of reference to: **James L. Sherley, M.D., Ph.D., c/o Human Resources Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *Equal Opportunity Employer.*

POSTDOCTORAL ASSOCIATE(S) to determine how metabolites and ions regulate the activity of intracellular Ca^{2+} channels. Studies will focus initially on the Ca^{2+} release channel/ryanodine receptor in malignant hyperthermia, an inherited syndrome that results from a mutation in this protein (see *American Journal Physiology* **266**: C1729-C1735, 1994; *ibid.* **267**: C1253-1261, 1994). Candidates should have training in electrophysiology; expertise in single channel analysis would be highly advantageous. Enquiries to: **Dr. Charles F. Louis, Department of Veterinary PathoBiology, University of Minnesota, Room 295, 1988 Fitch Avenue, St. Paul, MN 55108. Telephone: 612-624-4202.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

SCHOOL OF PUBLIC HEALTH UNIVERSITY OF CALIFORNIA, BERKELEY

POSTDOCTORAL RESEARCH appointments are occasionally available with individual faculty members in the School of Public Health of the University of California at Berkeley. Appointments are normally made for a year, but with the possibility of renewal for a second year. Highly qualified persons are invited to apply for positions to be assumed at the time of, or shortly after, the completion of doctoral studies. A single application should be addressed to the faculty member with whom the applicant prefers to be associated. (In the event that no position is available with that faculty member, the application will be circulated to other faculty members with similar research interests.) Arrangements should be made for one confidential letter of reference to be sent by the person best able to judge the applicant's research achievements and potential. Applications should include a résumé, a brief statement of research experience, interests and goals, and the names and the addresses of two additional references. Send application or request for further information to: **Academic Personnel Unit, School of Public Health, University of California, 19 Warren Hall, Berkeley, CA 94720.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION DEPARTMENT OF NEUROBIOLOGY THE SCRIPPS RESEARCH INSTITUTE La Jolla, California

Applications are invited for an immediate position of **POSTDOCTORAL FELLOW** to study the structure and function of cell surface proteins critical in neural development and regeneration. Studies focus on cell adhesion molecules (CAMs) and the extracellular and cytoplasmic proteins that interact with CAMs; both native and recombinant proteins are used. Please submit a curriculum vitae including a statement of research experience/interests and arrange for letters of reference to be sent to: **Bruce Cunningham, The Scripps Research Institute, Department of Neurobiology, 10666 North Torrey Pines Road, SBR-14, La Jolla, CA 92037.** *The Scripps Research Institute is an Affirmative Action/Equal Opportunity Employer.*

A **POSTDOCTORAL POSITION** is available, starting July 1, 1995, in the Department of Microbiology and Molecular Genetics, Harvard Medical School. Candidates need to be experienced in bacterial genetics and physiology. The project involves experimental evolution of physiological function of enzymes (*in vivo* protein engineering) in *E. coli*. The salary will be commensurate with experience and the appointment can be up to three years. Send curriculum vitae with names of three referees to: **Professor E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 200 Longwood Avenue, Boston, MA 02113.**

POSTDOCTORAL POSITION Program for Cellular and Molecular Mechanisms in Animal Disease

An immediate opportunity for an individual to participate in a research program focused on the interaction of bacterial ligands with cellular receptors. Candidates must have a Ph.D. in Microbiology, Molecular Biology or a related field, research experience in the molecular biology of bacteria, and effective communication and interpersonal relations skills. Experience in gene expression is desirable, particularly if it involves transported microbial proteins. Send curriculum vitae, transcripts, three letters of reference, a one-page summary of research interests and a reprint or preprint of most significant paper to: **Dr. David H. Francis, Department of Veterinary Science, P.O. Box 2175, South Dakota State University, Brookings, SD 57007-1396. Telephone: 605-688-6361; TT/Voice: 605-688-4394.** Deadline: March 1, 1995, or until filled. *An Affirmative Action/Equal Employment Opportunity Employer/ADA Reasonable Accommodations.*

POSTDOCTORAL POSITION: Available immediately to develop serological assays for the diagnosis of invasive *Candida* infections. Experience with Western blots, radioimmunoassays, tissue culture essential. Knowledge of microbiology/mycology desirable. Individual should be capable of independent work. Send curriculum vitae and references to: **Dr. Carol Singer, Long Island Jewish Medical Center, Infectious Diseases Division, Room FP 333, 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 POSITION in gene expression to study transcription factor regulation of *Drosophila* muscle genes in transgenic flies (see *Devl. Biol.*, **159**:513, 1993). Experience in recombinant DNA technology is required and experience in *Drosophila* genetics is desirable. Position is available immediately. Applicants must have a Ph.D. Send curriculum vitae and names of three references to: **Dr. Robert V. Storti, Department of Biochemistry (MC/536), University of Illinois College of Medicine, 1853 West Polk Street, Chicago, IL 60612.** *University of Illinois at Chicago is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION at University of California, San Francisco(UCSF)-San Francisco General Hospital to study signal transduction in macrophages infected with *Mycobacterium tuberculosis*. One project focuses on interferon gamma signaling; the other on intracellular calcium in phagosome trafficking. Requirements include Ph.D. and cell biology experience. Experience in signaling or microbial pathogenesis highly valuable. Send curriculum vitae and names of three references to: **Dr. Joel Ernst, UCSF Box 0868, San Francisco, CA 94143-0868.** *UCSF is an Equal Opportunity/Affirmative Action Employer.*

Two **POSTDOCTORAL RESEARCH POSITIONS** are available at the Hormel Institute of the University of Minnesota, Austin, Minnesota, to study the effects of alcohol on signal transduction across cell membranes. The work will focus on the structure, function and cellular regulation of phosphatidylethanolamine-specific phospholipases. The candidates must have Ph.D. and experience in cell culture, protein purification and molecular biology. Send curriculum vitae and names of three references by March 15, 1995, to: **Dr. Zoltan Kiss, The Hormel Institute, University of Minnesota, 801 16th Avenue, NE, Austin, MN 55912.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSTDOCTORAL POSITION available June 1995. To study flagellar assembly in *Chlamydomonas*. Projects include the role of kinesins in the development and maintenance of the flagellum and the vertebrate rod outer segment (ROS); targeting of proteins to the flagellar compartment; assembly of the flagellar radial spokes. Experience in techniques of cell/molecular biology helpful. Send curriculum vitae and references to: **Joel L. Rosenbaum, Department of Biology, Kline Biology Tower, Room 310, Yale University, P.O. Box 208103, New Haven, CT 06520-8103.** *An Affirmative Action/Equal Opportunity Employer. Women and minority group members are especially urged to reply.*

UT **Nancy Gore Hunger Chair of Excellence in Environmental Studies**
University of Tennessee, Knoxville **UT**

The College of Arts and Sciences, University of Tennessee, Knoxville invites nominations for the Nancy Gore Hunger Chair of Excellence in Environmental Science. The Chairholder will represent a "capstone" position in their area of study. The Chairholder will be expected to develop and sustain a dynamic research program. In addition, the Chairholder will be expected to be active at the national/international level as part of efforts by professional societies and research agencies in defining scientific issues and planning the global environmental research agenda. The Chairholder will contribute in appropriate ways to the education mission of the University at undergraduate and graduate levels. The Chairholder will provide leadership on the UTK campus to bring interests at UTK, the nearby Oak Ridge National Laboratory and elsewhere, together to provide integration of knowledge across fields to achieve a synthesis of our scientific understanding relevant to current and emerging scientific and policy debates.

The Chairholder will meet qualifications for tenure at the rank of Professor in one of the natural science, social science, or mathematics departments of the University of Tennessee, Knoxville with a specialization in an area of science relevant to global environmental studies. The Chairholder will have a significant reputation for contributions to our understanding of the Earth system.

Letters of nomination and application should be directed to:

W. Franklin Harris, Chair
Nancy Gore Hunger Chair of Excellence Search Committee
M303 Walters Life Sciences Building
Knoxville, TN 37996-0830
Phone: (615) 974-6841
Email: WFHARRIS@UTKVX. UTK. EDU

Review of nominations will begin March 27, 1995 and continue until a successful candidate is selected. The expectation is that the Chairholder will be in place by August, 1996.

The nomination of and application by qualified women and minorities is encouraged. *UTK is an EEO/AA Title IX/Section 504/ADA Employer.*

Bristol-Myers Squibb Pharmaceutical Institute in Syracuse, NY, has an opening in its Drug Metabolism and Pharmacokinetics group for a scientist to develop/validate enzyme immunoassays for quantitating biologicals in biofluids.

Bristol-Myers Squibb

ASSOCIATE RESEARCH SCIENTIST

Drug Metabolism & Pharmacokinetics

Responsibilities also include providing analytical support for clinical and pre-clinical studies of BMS biological drug candidates, and assisting in immunization and hybridization procedures for generation of specific monoclonal antibodies.

The qualified candidate should have a BS/MS degree with 2-4 years experience in enzyme immunoassay techniques, tissue culture techniques, and hybridoma technology. Must have the ability to accomplish an assigned, well-defined objective and carry out these experiments effectively and efficiently. Must be open to relocation in the future.

We offer an excellent salary and comprehensive benefits. For consideration, forward your resume with salary requirements to: **Manager Human Resources, BRISTOL-MYERS SQUIBB, Position #SY-950005, P.O. Box 4755, Syracuse, NY 13221-4755.**

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Australia: Call Keith Sandell at (+61) 02 922 2977, or fax to (+61) 02 922 1100.
Japan: Call Mashy Yoshikawa at (+81) 3 3235-5961, or fax to (+81) 3 3235-5852.

SCIENCE

FACULTY POSITION

MOLECULAR BIOLOGIST/GENETICIST

Cancer Research Center, University of Hawaii

A tenure track ASSISTANT or ASSOCIATE RESEARCHER (Professor) position is available in the Molecular Carcinogenesis unit of the Cancer Etiology Program at the Cancer Research Center, University of Hawaii at Manoa. An investigator is sought who employs molecular and biochemical approaches to the study of the regulation, function, or mutagenesis of genes and proteins important in carcinogenesis. These may include oncogenes, tumor suppressor genes, cancer susceptibility genes, or genes for growth factors and cytokines, and receptors and signal transduction molecules. The successful candidate will be expected to establish or maintain an independently-funded, cancer research program and to interact with existing faculty with interests in the above areas, as well as mutagenesis, cancer chemoprevention, molecular epidemiology and the influence of hormones on carcinogenesis. Candidates should be willing to supervise Ph.D. and M.S. research students and to participate in graduate level team-teaching. Candidates must have a doctorate in the biological sciences, a minimum of four years of postdoctoral research experience, and a strong record of research accomplishment. Applicants at the Associate Professor level must have a history of strong research funding. Modern laboratories, central core facilities, a competitive salary, and start-up funds are available.

Applicants should send curriculum vitae, statement of present and future research interests, and the names, addresses and telephone numbers of three references to: Chairman, Molecular Biologist Search Committee, Cancer Research Center, University of Hawaii at Manoa, 1236 Lauhala Street, Honolulu, HI 96813. The position will be available July 1, 1995. Review of applicants will begin on March 31, 1995 and will continue until the position is filled.

The University of Hawaii is an Affirmative Action/ Equal Opportunity Employer. Women and minorities are encouraged to apply.

ESU EAST STROUDSBURG UNIVERSITY

EAST STROUDSBURG UNIVERSITY

Chemistry Department

Applications are invited for a tenure-track Assistant Professor position in Physical Chemistry beginning fall 1995. A Ph.D. in physical Chemistry, evidence of potential for excellence in both undergraduate instruction and research with undergraduates is required. The successful candidate will have strength in teaching introductory and advanced courses in physical chemistry, interest in innovative laboratory instruction, and research plans that enhance the activities of a 9-person ACS accredited department. Teaching duties will include introductory, advanced lecture and laboratory courses. The department resides in a newly renovated building, which is well equipped with instrumentation, including a new HPLC, GC/MS, FT-IR, N2-Laser, and 300 MHz BB FT-NMR. Candidates should submit a letter of application, vita, one-page statement of teaching philosophy, description of research plans, three letters of recommendation, and official undergraduate and graduate transcripts by March 10, 1995 to: Dr. William M. Loffredo, Chair, Search Committee, Chemistry Department, East Stroudsburg University, East Stroudsburg, PA 18301.

ESU is an AA/EEO employer M/F/H/V. A Pennsylvania State System of Higher Education University.

THE NATIONAL RESEARCH COUNCIL
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- Support for relocation and professional travel; health insurance program offered
- 3 annual award competitions for most participating laboratories

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Applications accepted on a continuous basis throughout the year. Those postmarked by April 15 will be reviewed in June, and by August 15 in October.

For application materials and information on participating laboratories contact:

The National Research Council

NAS NAE IOM

The Associateship Programs
(TJ-2094/SB)
2101 Constitution Avenue, NW
Washington, DC 20418
FAX: (202) 334-2759

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

The Foundation for Advanced Cancer Studies and Cold Spring Harbor Laboratory will cosponsor an exciting new meeting...

Cancer Genetics and Tumor Suppressor Genes

June 14-17, 1995
Hood College
Frederick, Maryland

Organized by — **Stephen H. Friend**, Harvard Medical School

Associate Organizers — E Fearon, E Harlow, B Ponder, G Vande Woude, B Volgelstein

Emphasis will be placed on cancer genetics and tumor suppressor genes. Graduate students and postdoctoral fellows are encouraged to attend. The format will consist of oral and poster presentations with overviews given by distinguished leaders in the field. This meeting presents an exciting new forum for young investigators to present and discuss their research - please plan to attend.

Registration (including housing and meals) is **$550.00 US.** Abstract submittal deadline is April 7,1995.

For details, please contact:
Margaret L. Fanning
Conference Office, FACS
P.O. Box 249 • 12120 Main Street
Libertytown, Maryland 21762
301-898-9266 • FAX 301-898-9173

PENNSTATE

"Chromosomal Controls of Gene Expression"

Penn State's 14th Summer Symposium in Molecular Biology *August 3-5, 1995*

A conference examining the roles of chromatin structures in gene regulation, organized by Andrew Buchman, David Gilmour, Robert Simpson, and Jerry Workman, faculty of Biochemistry and Molecular Biology at Penn State.

Thomas J. Watson, Jr. Keynote Lecture in Molecular Biology
Gary Felsenfeld *NIH*

Sessions

I. Control of Transcription
Peter Becker *EMBL, Germany*
David Gilmour *Penn State*
James Kadonaga *UC SD*
Roger Kornberg *Stanford*
Robert Roeder *Rockefeller U*

II. Modifiers of Chromatin Function
Andrew Buchman *Penn State*
Marian Carlson *Columbia Univ*
Martin Gorovsky *Univ Rochester*
Robert Kingston *Mass Gen Hosp*
Craig Peterson *Univ Mass*

III. DNA Replication and Developmental Controls
Trevor Archer *U West Ont*
John Diffley *ICRF, England*
Beverly Emerson *Salk Inst*
Bruce Stillman *Cold Spr Harb*
Alan Wolffe *NIH*

IV. Chromatin Domains
Jay Chung *NIH*
Michael Grunstein *UCLA*
Steve Henikoff *Hutchinson Ctr*
Paul Schedl *Princeton Univ*
Robert Simpson *Penn State*

Posters — **Afternoon Workshops** *(oral presentations selected from submitted abstracts)* — **Industry Exhibits**

Fees: Faculty/senior scientists-$150 postdocs/technicians-$80 grad students-$45. Information: Kamal Rashid, symposium director, or Patricia Phillips, program assistant, Penn State Biotechnology Institute, 519 Wartik Lab, University Park PA 16802; tel. 800-833-5533; fax 814-863-1357. **Abstracts:** Due 6/30/95.

ENDOWED CHAIR
SKELETAL MOLECULAR BIOLOGIST

Orthopaedic Research Laboratories
Department of Orthopaedic Surgery
University Of California at Davis

The Department of Orthopaedic Surgery at the University of California at Davis is seeking a cell/molecular biologist with a strong background in skeletal tissues, especially bone. The successful candidate will become the first recipient of the Lawrence J. Ellison Chair of Musculoskeletal Molecular Biology. Academic rank will be at Associate or Full Professor, commensurate with credentials.

Qualifications include a doctoral degree in a pertinent discipline, an outstanding record of accomplishment in cell and molecular biology with special emphasis on skeletal tissues, and excellence in teaching and administration of research projects. Candidates must have demonstrated the ability to pursue scientific questions in skeletal cell biology using advanced molecular techniques. The establishment of this position is predicated on an organized effort within our laboratory to address problems related to the ability of skeletal tissues to adapt to mechanical loading and repair damage. The successful candidate is expected to become part of an inter-disciplinary team of investigators with expertise in biomechanical engineering, bone remodeling, and bone pathophysiology.

Send letter of interest, curriculum vitae, and names and addresses of five references to R. Bruce Martin, Ph.D., University of California, Davis, Orthopaedic Research Laboratories, Research Facility, Room 2000, 4815 Second Ave., Sacramento, CA 95817.

The position is open until filled; but to assure full consideration, applications should be received no later than September 30, 1995. The University of California is an Affirmative Action/Equal Opportunity Employer.

Department of Health and Human Services • National Institutes of Health

Director, National Cancer Institute

Nominations and applications are being sought to fill the position of Director of the National Cancer Institute (NCI). The NCI conducts, supports and manages innovative and comprehensive cancer research, treatment, prevention and control programs that are national and international in scope. The NCI has a staff of over 2,300 and a budget in excess of $2.1 billion.

The Director of the NCI has a major influence on the direction and quality of cancer research in the United States. The Director coordinates all of the activities of the NIH relating to the National Cancer Program. He or she develops a National Cancer Plan and monitors its implementation; directs and coordinates NCI's programs and activities; and develops and provides policy guidance and staff direction to the Institute's programs, including program coordination, planning, clinical care, and administrative management.

The Director of the NCI is a Presidential appointee and is responsible for keeping the Director of the NIH, the National Cancer Advisory Board, and the President's Cancer Panel informed of the status and progress in meeting objectives of the national and international efforts to conquer cancer. The Director of the NCI also serves as a senior member of the staff of the Director of the NIH, providing guidance and advice on matters relating to the general policies and research directions of the NIH.

The Director must hold an M.D., Ph.D., or equivalent degree, and have an international reputation for his or her scientific accomplishments and leadership in originating and directing board programs of fundamental and/or clinical research in cancer or a closely related field. The Director can direct his or her own basic or clinical research laboratory at the NIH.

Several options are available for appointment, and salary is negotiable within limits established by law.

Nominations must be received by February 17, 1995. If possible detailed **curriculum vitaes** should be submitted with nominations.

Applications must be received by February 24, 1995. Applications should consist of a detailed **curriculum vitae**, including a complete bibliography.

Send nominations and applications to:

Stephen C. Benowitz, Director of Human Resources
National Institutes of Health, Building 1, Room B1-60
1 Center Dr MSC 0126, BETHESDA MARYLAND 20892-0126

If you wish to send a nomination or application by facsimile, the number is (301) 402-0345. For additional information, contact Mr. Benowitz at (301) 496-3592.

Nominations and applications are welcomed from women, minorities and persons with disabilities.

U.S. Citizenship is Required • NIH is an Equal Opportunity Employer

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ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Food Science and Human Nutrition at Iowa State University seeks to fill a tenure-track faculty position. **Preference will be given to an individual who has experience in clinical nutrition and is willing to use stable isotopes to investigate human nutrition or metabolism problems.** The selected candidate is expected to participate in the undergraduate and graduate teaching programs of the department and in research that will utilize the human metabolism unit in the Center for Designing Foods to Improve Nutrition. The metabolic unit can accommodate 25 - 30 ambulatory experimental subjects and is equipped with TOBEC and DEXA instruments for body composition. A mass spectrometry unit adjacent to the metabolic unit supports a Finnigan ICP-MS, Fisons Optima GC-C-IRMS with multiple interfaces, and a Fisons Trio GC-MS with both EI and CI capabilities. Operations of both units are coordinated by full-time doctoral scientists. The Center also has sensory evaluation, analytical and animal care facilities. A Ph.D. or M.D. degree with training in nutrition or a related life science area is required. Experience in teaching and in extramurally funded research in human metabolism or clinical nutrition is expected. *Iowa State University is an Equal Opportunity/ Affirmative Action Employer. Women, minorities and members of other protected groups are encouraged to apply.* Submit a letter of application, curriculum vitae, statement of research and teaching interests, and arrange for at least three letters of reference to be sent to: **Dr. Murray L. Kaplan, Ph.D., Chair of the Search Committee, Department of Food Science & Human Nutrition, 1127 Human Nutritional Sciences Building, Iowa State University, Ames, IA 50011-1060 (Tel: 515-294-9304; FAX: 515-294-6193).** Screening of applicants will begin immediately and continue until position is filled.

Exploratory Drug Discovery

Pfizer Central Research in Groton, CT has immediate opportunities for creative scientists in its two Exploratory Lead Discovery groups.

Research Scientists These two scientists will develop and run a variety of high throughput assays and pursue leads in second messenger and other functional systems. Each will supervise 2-3 assistants and work closely with chemists and biologists throughput Pfizer Discovery. One position requires a Ph.D., and postdoctoral experience in enzymology or molecular pharmacology, with expertise in enzyme assays and functional follow-up systems. The second position requires a Ph.D., and postdoctoral experience in biochemistry or molecular pharmacology, with expertise in receptor binding assays, cell biology, and the maintenance and use of mammalian expression systems in molecular pharmacology. In both cases chemical literacy would be valuable, and experience with high-throughput assays is desirable but not essential.

Research Associates We have openings for several B.S./M.S. scientists who should have degrees in biochemistry or cell biology and experience with a wide variety of *in vitro* assay methods, such as enzyme, radioligand binding, second messenger, and functional cell construct assays. We seek creative, professional scientists who will work independently and interact with a wide variety of colleagues.

Please submit resume suitable for electronic scanning, i.e. eliminate italics, bullets, bolds, underlines and staples; laser printed preferred. Send to: **Employee Resources, AD 1004, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.**

We are an equal opportunity employer M/F/D/V.

Pfizer

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sanofi WINTHROP

Sanofi Winthrop, a french-based pharmaceutical firm, is expanding its research facilities in the U.S. We currently have opportunity available at our suburban Philadelphia facility for an individual with enhanced problem solving and creative solution skills and the ability to plan, analyze and re-evaluate.

Toxicology/Pathology Associate Research Director

Manage the Safety and Experimental Toxicology Section to assure the scientific quality and regulatory acceptance of all safety studies for the advancement of new compounds through IND and NDA status. Responsibilities will include serving as toxicology representative on development project teams, overseeing study directors for nonclinical laboratory studies and monitoring quality of safety study contract laboratories.

Requirements include a DVM or PhD in Toxicology, Pharmacology or a related field with experience in Toxicology and expertise in at least two other areas. Candidate must have demonstrated ability in developing novel approaches to scientific investigation, the knowledge to deal with dissimilar functions and laboratory approaches and the ability to supervise investigators.

At Sanofi Winthrop, you'll enjoy a highly competitive salary and benefits package. For confidential consideration, forward your resume and salary requirements to: **Human Resources, Sanofi Winthrop, 1250 S. Collegeville Road, Position V-035-94, P.O. Box 5000, Collegeville, PA 19426-0900.** Equal Opportunity Employer, M/F/D/V.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

NIOSH
National Institute for Occupational Safety and Health

CDC in Atlanta, Georgia, invites applications for the following position:

Director, Health Effects Laboratory Division (HELD),
National Institute for Occupational Safety and Health (NIOSH)

The Director, HELD, provides leadership in developing and executing a national laboratory program on the causes and prevention of occupational disease. HELD is a newly established research division to be housed in a new, state-of-the- art laboratory building in Morgantown, West Virginia. It will be staffed with 220 employees in such disciplines as molecular biology, pathology, engineering, chemistry, statistics, industrial hygiene, research physiology, medicine, and epidemiology. The responsibilities of HELD include using the most advanced laboratory-based techniques available to investigate the fundamental mechanisms of occupational diseases, improving existing programs for scientific investigation of worker populations; developing intervention programs to prevent disease and death in the workplace; and providing the flexibility for future changes in research goals and needs.

Qualifications include in-depth knowledge of occupational safety and health programs, broad knowledge of public health programs related to disease prevention, and proven ability to provide administrative and scientific leadership for a multidisciplinary health program. M.D. or Ph.D. preferred. This Senior Executive Service position is in the career civil service with an annual basic salary range of $92,900 to $115,700. Public Health Service Commissioned Corps Officers are also 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 March 15, 1995, to Nancy Peterson, Human Resources Management Office, Mailstop D01, Centers for Disease Control and Prevention, 1600 Clifton Road, N.E., Atlanta GA 30333. Tel. (404) 639-3614. CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

CHIEF, LABORATORY OF PEDIATRIC DISEASES
OFFICE OF VACCINES RESEARCH AND REVIEW
DHHS, PHS, FDA, CENTER FOR BIOLOGICS EVALUATION AND RESEARCH

The Division of Viral Products in the Food and Drug Administration seeks an outstanding scientist or physician to lead the Laboratory of Pediatric Diseases within the Center for Biologics Evaluation and Research, Office of Vaccines Research and Review, located on the NIH campus in Bethesda, Maryland. The Chief of the Laboratory of Pediatric Diseases is responsible for conducting basic and applied research on viral vaccines and immunologic products for the prevention and treatment of pediatric and respiratory viral diseases. The Laboratory is responsible for evaluating and reviewing new and licensed vaccines and making recommendations related to their use. The Chief will have the opportunity to continue his/her research program as well as develop programs in the laboratory through recruitment and supervision of scientists in a well funded research environment which includes modern laboratories, ALAAC approved small animal and primate facilities and the opportunity to interact with the NIH research community.

QUALIFICATIONS: **Physicians** must have completed all requirements for a Doctor of Medicine or Osteopathy Degree from an accredited institution. Candidates who are board certified or board eligible in infectious diseases are preferred. Graduates of foreign medical schools must submit a copy of their permanent Educational Commission for Foreign Medical Graduates (ECFMG) certification. For **scientists**, doctoral level degree in biology, microbiology, or chemistry along with advanced training and/or experience in virology or related area is preferred.

Candidates with a strong background in pediatric and/or respiratory viral diseases including laboratory research and a national/international reputation in virology or related area are desirable. In addition, candidates should have leadership and administrative experience with a demonstrated ability to direct complex scientific programs along with a keen interest in public health issues related to infectious diseases. **U.S. citizenship is required**.

SALARY: For **physicians**, Civil Service salary range for GS-14 through GS-15 is $67,385 to $93,166 per annum. Also, physicians may be eligible for a physicians' comparability allowance up to $20,000 per annum. For **scientists**, (other than M.D.), Civil Service salary range for GS-14 through GS-15 is $60,925 to $93,166 per annum. Salary, benefits, and level of responsibility are commensurate with education and experience. The grade level of this position depends upon the research qualifications of the candidate as determined by a peer review board. This position may be filled by appointment in the U.S. Public Health Service, Commissioned Corps with commensurate salary and benefits.

HOW TO APPLY: For additional information about the position and instructions on how to apply, call Ms. Boyer at (301) 443-6142. Applications must be received or post marked by March 31, 1995. FDA is an equal opportunity employer and has a smoke free environment.

ASSISTANT PROFESSOR
DEPARTMENT OF
ANATOMY AND NEUROBIOLOGY
DALHOUSIE UNIVERSITY

HALIFAX, NOVA SCOTIA

The Department of Anatomy & Neurobiology at Dalhousie University is seeking applications for a tenure-track position to commence July 1, 1995. Candidates must have a Ph.D. and have undertaken postdoctoral training. They will be expected to develop a strong, independent research programme and contribute to graduate training. Candidates are expected to teach gross anatomy or histology in medical, dental and health sciences programmes. Current research activities within the department include neurobiology, functional morphology, cell and molecular biology. Applications must include a curriculum vitae, representative reprints, an outline of present and future research directions, a summary of teaching experience and the names of three referees. Review of applications will begin February 1, 1995 and continue until the position is filled. Dalhousie University is an Employment Equity/Affirmative Action Employer. The University encourages applications from qualified Women, Aboriginal Peoples, Racial Minorities and Persons with Disabilities. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Position is subject to budget approval. Please submit an application to: Dr. D.A. Hopkins, Professor and Head, Department of Anatomy & Neurobiology, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 4H7 Telephone: 902-494-2051 Fax: 902-494-1212. Intent to apply can be E-mailed to Carl.Stevens@Dal.Ca

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

Life Sciences Research Office

Director

The Federation of American Societies for Experimental Biology (FASEB) invites nominations and applications for the position of Director of its Life Sciences Research Office (LSRO). Reporting to the FASEB Executive Director, the LSRO Director provides administrative oversight and coordination for all activities of LSRO. These activities include solicitation of funding and development of responses to proposal requests; selection of expert panels and staff support for panel deliberations; drafting of interim and final reports; and, publication of completed studies in scientific journals or as monographs. In particular, the Director ensures that scientific liaison is maintained with public agencies, private and corporate sponsors, groups with research programs in biomedical and life sciences, and institutions of higher learning. The Director also serves as project leader for selected projects when expertise is appropriate.

Founded in 1962, the Life Sciences Research Office draws on the expertise of the members of FASEB's Member Societies to provide expert evaluation of timely and important scientific issues through review by qualified scientists. Sponsors of LSRO studies have included government agencies, private foundations and corporate sponsors. The office is currently staffed by 15 scientists and other professionals.

Candidates for this position are to have a doctoral degree in a biomedical or life sciences, a record of productive scholarship, demonstrated ability to work effectively with sponsor agencies, and experience providing direction and coordination for a research team managing diverse projects.

Applications and nominations should be submitted to:

FASEB
Office of Human Resources
9650 Rockville Pike
Bethesda, MD 20814-3998

FASEB IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

POSTDOCTORAL POSITIONS

National Institute of Allergy and Infectious Diseases

National Institutes of Health
Announcement No. : PA-14

Postdoctoral Positions are available to study antigen processing/MHC recognition and NK recognition; structure/function of integrins; γδ T cells; and transcription factors of immune relevance, Applicants must have less than three years of postdoctoral experience. Salary range $25,000 to $30,000, depending on experience.

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

John E. Coligan, Ph.D.
Chief, Laboratory of Molecular Structure
National Institute of Allergy and Infectious Diseases
National Institutes of Health
Twinbrook II
12441 Parklawn Drive, Room 103
Rockville, MD 20852-1727

(301) 496-3213 phone
(301) 402-0284 fax

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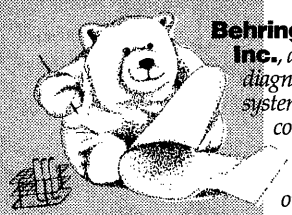

Behring Diagnostics, Inc., *a leader in supplying diagnostic instrument systems to the medical community, is currently experiencing significant growth within our industry.*

Senior Research Scientist

In this position you will develop new assays and provide product support for existing assays for serological testing and detection of microbial pathogens from human bodily fluids. Expertise in immunoassay development, project management, purification, and labeling of protein and immobilization of protein on solid phase are required. Familiarity with infectious disease and nucleic acid probe technology are desirable.

Requirements include a Ph.D. in biochemistry or microbiology along with 2-4 years of industrial experience.

Please send a brief cover letter with your resume including salary history and requirements to: Human Resources, **Behring Diagnostics, Inc.**, *151 University Ave., Westwood, MA 02090. No phone calls, please. We are an equal opportunity employer offering a smoke-free environment.*

BEHRING

CELL BIOLOGY FACULTY POSITIONS

The Cell Biology and Anatomy Department of the Mount Sinai School of Medicine continues to expand and is seeking an individual at the Associate or Full Professor level. We will also consider an exceptional individual for appointment at the Assistant Professor level. We are especially interested in investigators studying intracellular protein translocation, vesicular transport, and membrane and organelle assembly, by molecular and genetic techniques. Newly renovated laboratories and extensive research support facilities are available. PhD's with demonstrated productivity and grant support should send a C.V., one-page summary of research plans, and recent publications to: **Dr. Paul B. Lazarow, Chairman, Cell Biology and Anatomy, Box 1007, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** Please ask three individuals to send reference letters, and indicate their names and phone numbers. An Equal Opportunity Employer; women and minorities are encouraged to apply.

Mount Sinai

The Mount Sinai Medical Center of New York

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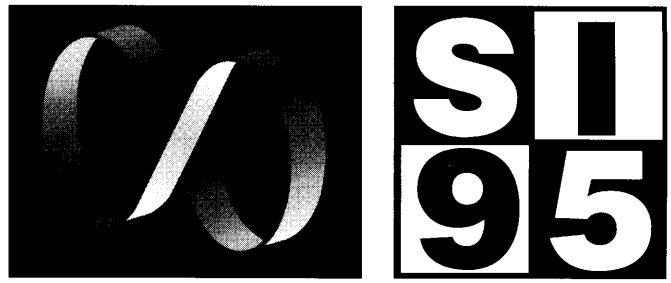
At the premier event for scientific and technical professionals

The AAAS Annual Meeting and Science Innovation Exposition

Marriott Marquis • Atlanta, GA
16–21 February 1995



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American Association for the Advancement of Science

Plenary and Topical Lectures

Plenary Lectures

6:30-7:30 PM

Keynote Lecture
THURSDAY FEBRUARY 16
Bruce Babbit, U.S. Secretary of the Interior

FRIDAY, FEBRUARY 17
Edward O. Wilson, Harvard Univ
Unity in Biodiversity

SATURDAY, FEBRUARY 18
President's Lecture:
Francisco J. Ayala, Univ of California-Irvine
The Myth of Eve: Molecular Biology and Human Origins

SUNDAY, FEBRUARY 19TH
Daniel S. Goldin, National Aeronautics and Space Administration

MONDAY, FEBRUARY 20
Wallace S. Broecker, Lamont-Doherty Earth Observatory
Abrupt Climate Change: Is One Hiding in the Greenhouse?

Topical Lectures

1:00-2:00 PM

FRIDAY, FEBRUARY 17, 1995

Integrated Ecological Economic Modeling and Adaptive Management of Complex Systems
Robert Costanza, Maryland Int'l Inst for Ecological Economics

The Engineer's Role in Sustainable Development
Henry J. Hatch, Law Companies Group, Inc.

The Chemical and Biological Weapons Conventions
Matt Meselson, Harvard Univ

Sarton Lecture: Darwinism Comes to America: A Reappraisal of Scientific Responses
Ronald L. Numbers, Univ of Wisconsin-Madison

The Science & Techology Component of the 4th World Conference on Women
Gertrude Mongella, Secretary General, 4th World Conference on Women

SATURDAY, FEBRUARY 18, 1995

Neutrons: Probing the Structures and Dynamics of Complex Materials
Robert J. Birgeneau, Massachusetts Inst of Tech

The Impact of Recombinant DNA on Agriculture and Society
George Brown, U.S. Congress

The Loss of Linguistic Diversity, Its Cost for Linguistic Science
Kenneth Hale, Massachusetts Inst of Tech

SUNDAY, FEBRUARY 19, 1995

Education Reform
Bruce Alberts, Natl Academy of Sciences

New Directions in Engineering Education
Eleanor Baum, The Cooper Union

Human Genome Diversity: Science and Ethics
L.L. Cavalli-Sforza, Stanford Univ

Cryptanalysis in World War II - Working with Alan Turing
Peter Hilton, SUNY-Binghamton

High Resolution Astronomy: Seeing the Unseen
Harold A. McAlister, Georgia State Univ

Overview of the U.S. Fusion Program
Marshall Rosenbluth, Univ of California-San Diego

1995 McGovern Award Lecture in the Behavioral Sciences
Robert Wurtz, Natl Eye Inst

MONDAY, FEBRUARY 20, 1995

Benefits of Long-Term R&D to Industry and National Well-Being
Mary Good, U.S. Dept of Commerce

How Much Land Can Ten Billion People Spare for Nature?
Paul Waggoner, Conn Agricultural Exp Station

Telemedicine — A New Health Care Delivery System
Jay Sanders, Medical College of Georgia

The Changing Patterns of Oral Disease
Harald Löe, Natl Inst of Dental Research

Science and People of Color
Walter Massey, Univ of California

Can Integrated Assessment Link Science and Policy for a Sustainable Future?
Robert S. Turner, Oak Ridge Natl Lab

The Case of Orangutans and Other Great Apes
Terry Maple, Zoo Atlanta

TUESDAY, FEBRUARY 21, 1995

Precision Farming: The Next Revolution in Agricultural Management?
Pierre C. Robert, Univ of Minnesota

Pheromones
Ring Carde, Univ of Massachusetts

Science Innovation
Douglas C. Wallace, Emory Univ Schl of Med

Science, the New Frontier: A Design for the Future
Harvey Brooks, Harvard Univ

Mathematics Education
Uri Treisman, Univ of Texas-Austin and Robert Moses, The Algebra Project

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Exhibit Hours

Friday, February 17, 1995	5:00 PM	– 7:00 PM
Opening Reception	5:00 PM	6:30 PM
Saturday, February 18, 1995	10:00 AM	4:00 PM
Sunday, February 19, 1995	10:00 AM	4:00 PM
Monday, February 20, 1995	10:00 AM	3:00 PM

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[2] Membership dues indicated herein are at the 1994 rates. Although dues increased on January 1, 1995, the 1994 rates are guaranteed through 21 February 1995 for registrants of the Annual Meeting; $50 of dues plus international postage are allocated to *Science*. Please allow 4-6 weeks for receipt of your first issue of *Science*. Canadian rate includes GST #125488122.

[3] Registration payments are nonrefundable except in the event of duplicate or over payments. All refunds will be processed after the meeting.

[4] Checks must be in United States currency and must be payable on a U.S. bank.

POSTDOCTORAL POSITIONS
(IPNS DIVISION)

Argonne National Laboratory, one of the nation's premier scientific research and development organizations, located 20 miles southwest of Chicago, is now looking to immediately fill 3 postdoctoral positions in its Intense Pulsed Neutron Source (IPNS) Division. Candidates must have received their Ph.D. not more than 3 years prior to the beginning of the appointment in a discipline such as biophysics or biochemistry for Postdoc1; physics, chemistry, metallurgy or materials science for Postdoc2; and for Postdoc3 chemistry or materials science.

Structural Biology Research — conduct research on protein complexes by using small angle neutron scattering. Highly desirable is experience in SANS or SAXS applications, competence in software development for modeling, knowledge in protein crystallography and practical experience in biochemical sample preparation. **Reply to Box IPNS-Postdoc1-55.**

Development of Neutron Diffraction Techniques for Industrial Applications — position requires experience in x-ray or neutron scattering, preferably including familiarity with powder diffraction, numerical modeling and the Rietveld method. Background in metallurgy or materials engineering is desirable. **Reply to Box IPNS-Postdoc2-55.**

Neutron Spectroscopy and Molecular Dynamics Simulation of Molecular Sieve Materials — position requires experience in small angle scattering/spectroscopy, preferably using neutrons. A background in molecular sieve compounds is desirable. Experience in the area of computer simulation would be helpful. **Reply to Box IPNS-Postdoc3-55.**

ARGONNE NATIONAL LABORATORY · UNIVERSITY OF CHICAGO ·

Applications from candidates who can contribute to our EEO/Affirmative Action goals are welcome. Resumes, three letters of recommendation and possible statement of research interests and copies of selected publications should be forwarded to: Walter D. McFall, (insert appropriate box number), Employment and Placement, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, IL 60439. Telecommunications Device for the Deaf (708) 252-7722. Argonne is an equal opportunity/affirmative action employer.

DIRECTOR OF COMPUTER SCIENCE

The University of Georgia Complex Carbohydrate Research Center (CCRC) seeks a director of computer science to further develop a research program advancing the use of computers in carbohydrate science. The CCRC is a growing 110-member research center with more than 60 networked micro- and mincomputers, servers, and workstations, some serving state-of-the-art analytical instrumentation. The computer science director oversees CCRC software and hardware operations. Applicants should have demonstrated experience in artificial neural networks, C programming, and one or more of the fields of chemometrics, NMR or IR spectroscopy, or mass spectrometry. A general knowledge of analytical instrumentation and the chemical/biochemical sciences as well as an ability to collaborate with researchers and supervise personnel are highly desirable. A Ph.D. degree or equivalent experience is required, and salary is commensurate with qualifications. Application review begins on March 1, 1995, and will continue until position filled. Apply to Drs. Peter Albersheim and Alan Darvill, Directors, CCRC, UGA, 220 Riverbend Road, Athens, GA 30602-4712. An AA/EEO institution.

The University of Georgia

"Cell Signaling and the Cytoskeleton"

September 15-18, 1995

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MOLECULAR IMMUNOLOGY
JUNIOR OR SENIOR FACULTY POSITION AVAILABLE

The Department of Microbiology and Immunology invites applications for a junior or senior level, tenure-track position for an immunologist whose research interests are directed to molecular and/or cellular analyses of contemporary problems in immunology. Senior candidates should have strong records of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop high quality, extramurally funded independent research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. The Department offers a high quality, interactive intellectual environment with 80% of the faculty holding active extramural research grants.

A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, DNA sequencing, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive.

Review of applications will continue until the position is filled. Applications should consist of a curriculum vita, copies of several recent publications, a brief statement of future research goals and three letters of reference to be sent to:

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

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COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES
University of California, Davis

Inquiries are invited from qualified applicants for faculty positions available July 1, 1995.

Positions are 9-month tenure track appointments unless otherwise indicated*. Eleven month term employment will be offered and continued based upon academic personnel review.

Assistant Professor specializing in Mammalian Ecology. Teach and conduct research in mammalian ecology, such as conservation ecology, disease ecology, ecological genetics, population ecology, functional ecology, behavioral ecology, or related field. Apply to: Tim Caro, Wildlife, Fish, and Conservation Biology. Open until filled: to ensure consideration applications should be received by 4/15/95.

Assistant Professor specializing in Tropospheric Chemistry. Teach and conduct research in the area of tropospheric chemistry including the investigation of the primary biogeochemical cycles involving the atmosphere and regional scale air pollution chemistry. Apply to: Roger H. Shaw, Dept. of Land, Air, and Water Resources. Consideration date not yet determined.

Assistant Professor specializing in Soil Biogeochemistry. Teach and conduct research on the processes of biogeochemical cycling of nutrients and chemicals in agricultural and native soil ecosystems and the impacts of these processes on ecosystem sustainability. Apply to: Randy A. Dablgren, Dept. of L and, Air, and Water Resources. Consideration date not yet determined.

Assistant Professor specializing in Conservation Biology Policy. Teach and conduct research in policy related to the conservation of biological resources. Possible topics include the management of common property resources, the valuing of various types of goods and ecological services, and the formulation and implementation of policy regarding endangered species and protected areas. Apply to: Paul Sabatier, Division of Environmental Studies. Open until filled: to ensure consideration applications should be received by 3/15/95.

Assistant Professor specializing in Landscape Architecture. Position requires specialist to conduct research and teach in landscape ecological theory, planning, design and management methods, with emphasis on medium to large scale landscape restoration planning, environmental mitigation design, riparian systems planning, wildlife habitat design, or related natural systems/landscape conservation focus. Apply to: Robert L. Thayer. Dept. of Environmental Design- Landscape Architecture. Open until filled: to ensure consideration applications should be received by 4/14/95.

Assistant Professor specializing in Nutrition. Doctorate required in nutrition or a closely related field. The individual must be a Registered Dietitian with the ADA. The individual will assume responsibilities for directing the didactic program in dietetics; instruction of diet therapy courses; participate in academic advising of undergraduate and graduate students; and perform independent research in human nutrition. Apply to: J. Stern, Dept. of Nutrition. Open until filled: to ensure consideration applications should be received by 4/15/95.

Assistant Professor specializing in Quantitative Ecology. Responsibilities include research, on the study and application of ecological principle and processes to enhance natural resource use and environmental compatibility in agricultural systems. Graduate and undergraduate teaching in quantitative methodology in agricultural and ecological systems. Apply to Shu Geng, Dept. of Agronomy and Range Science. Open until filled: to ensure consideration applications should be received by 4/1/95, applications are encouraged after that date.

Assistant Professor specializing in Graphic Design. Position requires a specialist in visual communication and graphic design with emphasis on aesthetics, contemporary technology, social and scientific applications. A firm grounding design theory is also desired. The individual is expected to establish a research program involving applied graphic design and communication, and to provide leadership in the foundation curriculum of the Design major. It is anticipated that this individual would become an active interdisciplinary link between Design and other programs, especially Art and 'Science and Society'. Apply to: JoAnn Stabb, Dept. of Environmental Design. Open until filled: to ensure consideration applications should be received by 4/14/95.

Assistant Professor specializing in Agricultural Economics. The appointee is expected to develop a strong research program in an area of international trade and/or economic development. The specific research program will depend upon the expertise and interests of the candidate. Teaching responsibilities include an average of three quarter-length courses in the Departmental teaching program, emphasizing international trade and/or economic development at the graduate and undergraduate levels. Apply to: Lovell Jarvis, Dept. of Agricultural Economics. Open until filled: to ensure consideration applications should be received by 3/1/95.

Assistant Professor specializing in Biological Systems Engineering. This position pertains to development of equipment and processes which integrate engineering and biology at a biochemical or cellular level. A new engineering graduate course, most likely related to tissue culture or biotechnology, will be developed by this person. Apply to: Dept. of Biological and Agricultural Engineering. Consideration date not yet determined.

Assistant Professor specializing in Nematode Taxonomy/Systematics. The individual will contribute fundamentally to the center of excellence in biosystematics, phylogenetics, evolution and biodiversity that is evolving on the UC Davis campus. The appointee will conduct research on the taxonomy and morphology of nematodes found in freshwater, marine, or soil habitats, including the parasites of plants or animals. The appointee will provide teaching expertise at the graduate level in the areas of biosystematics, phylogeny and evolution. Apply to: Dept. of Nematology. Consideration date not yet determined.

Assistant Professor specializing in Plant Systematics. Teach at undergraduate and graduate levels. Develop a research program that specializes in the systematics, evolution and taxonomic relationships of horticultual crop species. Applicants should have a Ph.D. in Plant Biology, Botany or the equivalent with training and emphasis on taxonomy, systematics and evolution. Apply to: Systematist Search Committee, Dept. of Pomology. Consideration date not yet determined.

Assistant Professor specializing in Food Chemistry. Teach in areas of food chemistry and toxicology. Develop research in analytical/separation methods for food component and toxic substance isolation. Prefer candidate with expertise in analytical chemistry combined with training or experience in oxidant/anti-oxidant chemistry. Apply to: Ericka Barrett, Dept., of Food Science and Technology. Open until filled: to ensure consideration applications should be received by 6/1/95.

Assistant/Associate Professor specializing in Chemistry. Research emphasis will be in development of novel and improved analytical techniques for important toxicants in air, water, soil and biota. The successful candidate will teach undergraduate and graduate environmental chemistry courses. A Ph.D. in Chemistry, Agricultural Chemistry or a related field. Apply to: Analytical Chemist Search Committee, Dept. of Environmental Toxicology. Open until filled: to ensure consideration applications should be received by 5/1/95.

Assistant Professor specializing in Agronomy. The candidate will be expected to develop a comprehensive modern genetics program that emphasizes either molecular or quantitative approaches. A breeding effort focusing on the development of wheat cultivars adapted to the diverse growing regions of California will be an integral component of the research program. Funding to support the breeding program is potentially available from the California Wheat Commission and the California Crop Improvement Association. The appointee will be expected to participate in the training of genetics graduate students. Apply to: Larry R. Teuber, Dept. of Agronomy & Range Science. Open until filled: to ensure consideration applications should be received by 3/6/95.

Assistant/Associate/Professor, Assistant/Associate Entomologist, and Director Mosquito Control Research Laboratory. The candidate will be required to present formal courses in areas related to specialization and contribute to departmental teaching program. The candidate will develop a research program on innovative approaches for understanding/controlling mosquito populations as related to medical entomology and public health. Apply to: Robert K. Washino, Department of Entomology. Open until filled: to ensure consideration applications should be received by 2/15/95.

Assistant Professor specializing in Biochemical Genetics. Conduct research on plant biochemistry and/or biochemical genetics with relevance to agricultural plant production, utilization of quality. Teach undergraduate and/or graduate courses in related topics. Apply to: Richard Michelmore, Dept. of Vegetable Crops. Consideration date not yet determined.

Assistant Professor specializing in Botany/Weed Ecophysiology. Teach an undergraduate course in herbicide physiology. The emphasis would be on relationships between plant ecophysiology and herbicide action, selectivity, how these processes are modified by environmental conditions, and environmental fate of herbicides. There will be opportunity to develop a course along the candidate's area of specialization. Training of graduate students in the general area of weed science will also be expected. Conduct research on ecophysiology of weeds and crops, including interactions with herbicides. Apply to: Dave Bayer, Dept. of Vegetable Crops. Consideration date not yet determined.

***Assistant Professor specializing in Bioenvironmental Engineering (11-month tenure-track position).** The candidate will be expected to assist with departmental undergraduate and graduate teaching programs, and develop a research program dealing with problems associated with the production, collection, treatment and utilization of wastes generated by production agriculture with an emphasis on animal production systems. Applicants must have a Ph.D. in Engineering, or in related field with at least one graduate degree in engineering, the ability and desire to conduct both independent and cooperative research, and demonstrated ability and interest in teaching undergraduate and graduate bioenvironmental engineering courses. Apply to Raul Piedrahita, Dept. of Biological and Agricultural Engineering. Open until filled: to ensure consideration applications should be received by 3/31/95.

***Assistant Cooperative Extension Specialist and Assistant Vegetable Crops Postharvest Horticulturist. (11-month, career-track extension position)**. Appointee will develop and implement an extension and applied research program on postharvest physiology and handling of vegetable crops, and conduct an extension program on the transportation and distribution of all horticultural perishables. Appointee will provide statewide Extension leadership, interact with numerous clientele groups, provide farm advisor training and advising, and develop and affirmative action program. Appointee will have the opportunity to participate in Departmental teaching and in directing undergraduate and graduate research. Apply to: Marita Cantwell, Dept. of Vegetable Crops. Open until filled: to ensure consideration applications should be received by 3/15/95.

***Assistant Cooperative Extension Specialist and Assistant Weed Ecologist. (11-month, career track extension position)**. Conduct a mission-oriented research and extension program on weed biology and management. Position to be located in the Salinas Valley. Apply to: Kent Bradford, Dept. of Vegetable Crops. Consideration date not yet determined.

Positions anticipated to be open in the near future are listed below. Direct inquiries to the Chair of the department.

Natural Resource or Environmental Economist, Dept. of Agricultural Economics

Professorial positions have responsibilities for teaching, advising and research (in the Agricultural Experiment Station) and require teaching and research experience. Cooperative Extension position have responsibilities for applied research and outreach. Candidates must have a Ph.D. in an appropriate field. Applicants should submit resume, transcripts (if within five years of graduation), statement of research and teaching experience, list and reprints of publications, and the names and addresses of at least three persons familiar with the applicant's qualifications, to individual and department as noted for position (department name), University of California, Davis, CA 95616. Please indicate the position(s) in which you are interested. **The University of California is an Affirmative Action/Equal Opportunity Employer.**

WORLD HEALTH ORGANIZATION (WHO)
International Agency for Research on Cancer (IARC)

International Agency for Research on Cancer has an opening in its headquarters in Lyons, France, for a

Genetic Epidemiologist

with the task of developing a strong, competitive research programme in genetic cancer susceptibility. The successful applicant should have an M.D. or Ph.D. in biological sciences or equivalent and an internationally competitive research record in genetic epidemiology. He/she would have a significant experience in the genetics of complex diseases, in the planning, development and coordination of international collaborative projects and good experience in training/supervising staff. Technical expertise should include population genetics and experience in the conduct of linkage studies allowing the genetic mapping of disease susceptibility loci. Experience in the evaluation of genetic/environmental interaction in the causation of disease will be appreciated.

The successful candidate is expected to head a research unit focusing on genetic susceptibility to environmentally induced cancer. The incumbent is responsible for developing original projects aimed at evaluating through a genetic approach the role of genetic factors in cancer development. He/she interacts and collaborates with other IARC scientists including those of the molecular genetics and epidemiology units and outside collaborators in the implementation of molecular epidemiological studies and their execution and represents the Agency in his/her capacity of expert at scientific meetings. The incumbent will be expected to keep abreast of the methodological developments in this field. The initial appointment will be for two years, the first being probationary, and is renewable. The annual salary level is US$ 43 618 tax free at single rate and US$ 46 901 for a staff member with dependents plus a cost of living element which is currently 49,6% of above figures.

Those interested should write, enclosing a curriculum vitae to:

Personnel Office
IARC
150, Cours Albert Thomas
F-69372 Lyons Cédex 08 France
Fax no: (33) 72 73 85 75

Applications from women are encouraged.

UMEÅ UNIVERSITY,
UMEÅ SWEDEN

Associate Professor - Assistant Professor in Neuroendocronology

Associate Professor - Assistant Professor in Neuroendocronology is wanted for the Anér Laboratory of Experimental Epilepsy Research in the Department of Physiology, Umeå University. The Anér Laboratory is developed for the investigation of modulatory effects by steroid hormones on synaptic transmission in the cerebral cortex, and for study of interaction between the effects of steroid hormones (neuroprogestines) and the cholinergic, catecholaminergic and serotoninergic signal systems. Experience of hippocampus slice in vitro, patch clamp or confocal microscopic techniques is a merit. The grant is for research and is limited to 3 years. Salary is dependent on the qualifications of the applicant.

Applications should be sent to the Registrar, Umeå University, S-90187 Umeå Sweden, quoting Reg nr 322-2711-94.

Closing date for applications is **March 15, 1995**. Further details are given by Prof. emeritus Sven Landgren, Tel +46 90 166948 (office), +46 90 132521 (residence), Fax +46 90 166683.

The University of Zürich (Switzerland), Faculty of Sciences, invites applications for a

Professorship in Animal Behaviour

Applicants should have an excellent research record in areas concerning physiological or other proximate aspects of behaviour, especially in vertebrates (preferably mammals). The candidate is expected to establish a strong independent research programme and to interact with existing groups in neurobiology and behavioural ecology. He/she is required to participate in the teaching programme of the Institute of Zoology and to deliver lectures in German within two years.

Depending on the qualifications and age of the applicant, the position will be tenurable (Assistant Professor) or tenured (Associate or Full Professor).

Applicants should submit their curriculum vitae, brief summaries of previous research and future research plans, list of publications, copies of up to five major publications, and the names of three potential referees to the following address: Dekan der Philosophischen Fakultät II, Professor Dr. H. Fischer, Winterthurerstr. 190, CH-8057 Zürich, Switzerland. Applications will be accepted until March 15, 1995.

Informal enquiries concerning the position may be addressed to the Head of the Institute of Zoology, Professor Dr. R. Wehner (phone +41 1 257-4831, FAX +41 1 257-5716).

SCIENCE Advertising Supplement

Euroscience at Work: Career Opportunities in European Biotechnology and Pharmaceuticals

24 February 1995

Euroscience at Work examines the European life science job market. A practical career planning section for life scientists, *Euroscience at Work* looks at how pharmaceutical companies are adapting to the changing European market and gives an overview of the expanding European biotechnology industry.

Full page recruitment advertisements receive placement throughout this special advertising section. Fractional ads will be highlighted by a new Global Career Opportunities banner in the regular recruitment section of the issue.

Recruitment Advertising Space Reservation Deadline: 7 February 1995

To advertise, call:
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fax (44) 01223 302068.
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SCIENCE

EXPLORATION OF THE UNIVERSE
a challenge for Europe and its best scientists

The European Southern Observatory (ESO) is an intergovernmental organisation responsible for the most advanced astronomical research in the southern hemisphere. The eight Member States of the ESO are Belgium, Denmark, France, Germany, Italy, the Netherlands, Sweden and Switzerland.

As the prime European astronomical centre, ESO occupies a leading position in the world's scientific community. Its research work is of great value to many areas of science and industry. The Very Large Telescope (VLT) is a 400 MDM programme expected to be completed by the year 2000. It consists of four 8-metre telescopes to be built by European industry and installed in Chile. ESO is responsible for the conceptual design, engineering design and construction of some essential parts, as well as for the overall programme management.

This is an exceptional opportunity for those seeking creative involvements in an international scientific environment. Applications are invited for the following position, based at the ESO headquarters in Garching near Munich, Germany.

For the Data Management Division, ESO is seeking a (m/f)

HEAD OF THE DATA MANAGEMENT DIVISION
(Ref.: EDM 300)

Profile: the candidate will have a Ph.D in Astronomy, Physics or Computer Science, as well as several years of experience in major experimental projects in Astronomy producing large amounts of data. He/she should have demonstrated a knowledge of modern computing facilities, wide- and local-area computer networks and application softwares.

Responsibilities: the selected candidate will report directly to the Director General and work in cooperation with the VLT Programme Manager, the Associate Director for Science, the Head of the Instrumentation Division and the Head of the Space Telescope European Coordinating Facility to provide an efficient management, analysis, archival and distribution of all the astronomical data which are related to the scientific operation of the ESO observing facilities.

He/she will be responsible for: ☐ the maintenance and upgrade of the off-line computer facilities at the Headquarters and in Chile; ☐ the development of User's information systems; ☐ the remote submission of observing proposals; ☐ the VLT Sche-duling system; ☐ directing the software developments for data calibration and reduction for major ESO instruments, for calibration databases and for science archives, with particular attention to prospective requirements in the VLT, VLTI era; ☐ managing all sky surveys, digital scans and catalogues, photographic plate material and related measuring machines; ☐ establishing and maintaining cooperative efforts for software development with external Institutions, and proposing means to maintain and improve data transfer capabilities in Europe.

Remuneration for this post will be commensurate with background, experience and family status. It will be compatible with the salaries paid by intergovernmental organisations.

Although preference will be given to nationals of ESO Member States, this should not discourage suitably qualified applicants from other countries from applying. Positions are open to suitably qualified women and men. It is essential that all candidates have an excellent command of English. Knowledge of French or German would be an asset.

Applications with a brief c.v. (no supporting documentation unless requested) should specify the job reference and be submitted before February 24, 1995 to: Personnel Administration and General Services, European Southern Observatory, Karl-Schwarzschild-Straße 2, D-85748 Garching near Munich, Germany. Tel: 49-89.320.06.438 or 49-89.320.06.219.

EUROPEAN SOUTHERN OBSERVATORY

UNIVERSITY OF BERN
FACULTY OF SCIENCE
Professor of Biochemistry

Applications are invited for a full-time tenured position within the Department of Chemistry and Biochemistry starting April 1st, 1996.

The successful applicant is expected to complement one of two research strengths of the Department, namely, structure and function of membrane proteins and antisense DNA, to establish a research group in **protein X-ray crystallography** and to conduct an original research program. The successful applicant has access to the Swiss-Norwegian beamline at ESRF. Other areas of membrane protein biochemistry/biophysics will also be considered.

Applicants should have a record of outstanding research and teaching achievements in the field of biophysics or biochemistry. They are expected to participate in the teaching of biochemistry and general chemistry. Teaching in German is required but a period of adjustment can be granted. We welcome applications from women.

Applicants should send their curriculum vitae, a list of publications, a brief description of future research goals, and three reprints of representative publications **before April 15 1995** to:

Erziehungsdirektion des Kantons Bern, Amt für Hochschulen, (1600.28/93), Sulgeneckstrasse 70, CH-3005 Bern / Switzerland.

Further information may be obtained from Prof. B. Erni, Institute for Biochemistry, Freiestr. 3, CH-3012 Bern, Switzerland, Tel. ++41-31-631 43 46.

DEPARTMENT *of* BIOCHEMISTRY
TWO LECTURESHIPS

Applications are invited for 2 Lectureships, tenable from 1 October 1995. The Department wishes to make these appointments in any aspect of modern biochemistry, molecular biology or protein chemistry in relation to cellular and membrane biology, cell matrix interactions, cell physiology or the control of gene expression. Appointees will be placed on the scale £14,756–£25,735 per annum, with USS superannuation.

Please quote *REF: SCI 590025.*

Informal enquiries should be addressed to Professor J H Phillips (tel: 0131-650 3719; fax: 0131-650 3711: e-mailjhp@srvl.med.ed.ac.uk).

Further particulars are available from:
THE PERSONNEL OFFICE,
THE UNIVERSITY OF EDINBURGH,
1 ROXBURGH STREET,
EDINBURGH EH8 9TB,
fax: 0131-650 6509,

where applications (10 copies, including a curriculum vitae and the names and addresses of 2 referees) should be lodged.

Closing date: 16th February 1995.

Special Advertising Supplement

Careers in Biotechnology and Pharmaceuticals: Beyond Discovery

17 March 1995

On 17 March, *Science* will publish a special advertising section titled *Careers in Biotechnology and Pharmaceuticals: Beyond Discovery - Science Careers Up and Down the Production Stream.* This is a popular annual advertising section dedicated to biopharmaceutical employment matters with bonus distribution to two U.S. job fairs, one on each coast. This section will explore the exciting next phase of the biotech industry. It will look at how the manufacturing, regulatory, and service sectors of the modern biopharmaceutical company are growing, and it will highlight career paths in areas such as:

- Clinical Trials
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Job Fair Bonus Distributions
This highly visible issue will be distributed at two job fairs:

- Biotech/Pharmaceutical Job Fair, 24-25 March, La Jolla, California.
- Biotech/Pharmaceutical Job Fair, 28-29 April, Cambridge, Massachusetts.

Benefits of Full Page Advertisements
This section is an excellent opportunity for full page advertisers to get extra attention. Full page recruitment advertisements in the 17 March issue will receive placement throughout this career-related special advertising section. Names of the companies or institutions placing full page advertisements will be listed on an index affixed to the covers of the magazines distributed at the job fairs.

Advertising space reservation deadline: 28 February 1995

To advertise, call:
In the U.S., Janis Crowley at (212) 496-7704 or fax to (202) 682-0816.
In Europe, Gordon Clark at (+44) 01223 302 067 or fax to (+44) 01223 302 068.

SCIENCE

The London Hospital Medical College (University of London)

MEDICAL UNIT

NON-CLINICAL LECTURESHIP IN MOLECULAR GENETICS

Applications are invited for a research position in the Molecular Genetics section of the Professorial Medical Unit which has a major interest in identifying genetic determinants of autoimmunity, diabetes and obesity. This is a new post and will be appointed at the Lecturer B level (Salary scale: £20,133 - £25,735 p.a. plus L.W.). The appointee should be able to function as an independent investigator but within a team. The post is funded for 5 years, renewable by mutual agreement. The appointee will be expected to have previous experience in molecular biology and the ability to develop his/her own research interests, to attract external funding and to help supervise ongoing projects. Possession of a higher degree, extensive research experience and ability to attract external funding is essential.

Informal enquiries may be made to:

Dr. Graham A. Hitman
Tel: 0171-377-7111; Fax: 0171-377-7636; E-mail: G.Hitman@lhmc.ac.uk

Copies of the job description are available on written request from Dr. Graham A. Hitman, Medical Unit. The Royal London Hospital, Whitechapel, London E1 1BB, to whom applications in the form of C.V. (3 copies), together with full details of two referees, should be returned. Closing date for applications: 17th March 1995.

Postdoctoral Research Fellowship

Department of Pharmacology & Clinical Pharmacology

Applications are invited for two Postdoctoral Research Fellowships, both available for periods of three years.

Vacancy UAC.551

The work to be undertaken is on the cellular regulations of the biosynthesis, metabolism and action of cytokines, eicosanoids and various inflammatory mediators.

The successful applicant will have experience with cell culture, modification of immune function, signal transduction analyses and ELISA/RIA.

Vacancy UAC.552

The work to be undertaken is on the molecular regulation of eicosanoid, cytokine and vascular mediator biosynthesis, metabolism and action. The successful applicant will have experience with cell culture, various imunoblotting techniques, nuclear run on transcription, mRNA stability measurements and analyses of 5' flanking region of genes desirable.

Stipends will be in accordance with The University of Auckland academic salary scale.

For further information please contact Professor Murray Mitchell, telephone 64-9-373 7999 ext 6733, fax 64-9-373 7556.

Applications in the form of detailed CV and including the contact details for two or more referees close with the Registrar, The University of Auckland, Private Bag 92019, Auckland, New Zealand on **28 February 1995.**

Please quote the relevant Vacancy Number in all correspondence.

W B NICOLL, REGISTRAR

The University of Auckland

New Zealand

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バイエル薬品(株) 中央研究所

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<自己免疫疾患分野>

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職務内容：自己免疫疾患領域における医薬品探索のための分子生物学的研究

※当職位には将来の管理職として、研究方針の策定及びプロジェクトの指揮等のマネジメントの職務が追加される予定です。

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勤務地：中央研究所('95年2月開設) 京都府相楽郡木津町／関西文化学術研究都市木津南地区

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応募書類：履歴書(日・英)、研究概要(日・英各 A4 1枚程度) 及び主要論文のコピーを下記宛お送りください。

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Science Advertising Calendar of Events

Mark Your 1995 Calendar for These Exciting Advertising Opportunities

27 January
Bonus Distribution to the Biotechnology/ Pharmaceutical Job Fair in San Francisco, California, 3-4 February 1995.
Bonus distribution to nearly 1,000 scientists at the '95 Miami Bio/Technology Winter Symposia, 5-6 February 1995.

3 February
Editorial Focus, Gordon Research Conference. Scientists look to the Gordon Research Conference issue when planning their attendance at these acclaimed sessions.

10 February
Bonus Distribution to the AAAS Annual Meeting in Atlanta, Georgia, 17-20 February 1995. Over 3,500 scientists from around the globe will attend.

24 February
Special Advertising Section, *Euroscience at Work: Career Opportunities in European Biotechnology and Pharmaceuticals.*
SCIENCE explores the life sciences career market in Europe and tells readers where to find the best career opportunities. Full page recruitment ads will be positioned with the editorial. Fractional advertisements for positionsoutside the U.S. will be placed under a Global Careers Banner in the classified section.

3 March
Bonus Distribution to the Biotechnology/ Pharmaceutical Job Fair, 10-11 March, New Jersey.
Bonus Distribution to the American Physical Society meeting, 22-24 March, San Jose, California.

10 March
Editorial Focus, Molecular Biology: Cellular Regulation I.
Bonus Distribution to attendees at the American Association for Cancer Research meeting, 19-21 March, Toronto, Canada.
Bonus Distribution to USGEB, 30-31 March, Fribourg, Switzerland.

17 March
Special Advertising Section, *Careers in Biotechnology and Pharmaceuticals: Manufacturing & Regulatory Affairs.*
Bonus Distribution to two Biotechnology/ Pharmaceutical Job Fairs:
24-25 March, La Jolla, California and
28-29 April, Cambridge, Massachusetts.

24 March
Bonus Distribution to the American Chemical Society, 3-5 April, Anaheim, California.

31 March
Editorial Focus, Frontiers in Materials Science.
Bonus Distribution to the Materials Research Society meeting, 18-20 April, San Francisco, California.

For Recruitment Advertising:
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MOLECULAR EVENTS IN HUMAN PLACENTATION

POSTDOCTORAL FELLOW/Research Associate position available immediately to study molecular and cellular mechanisms in disorders of human placentation. We are studying genes involved in preeclampsia, intrauterine growth retardation, and preterm labor. Strong background in biochemistry or cell biology required; experience with molecular methodologies recommended. Inquiries should be sent to: **Dr. Kenneth Ward, M.D., Perinatal Genetics Program, University of Utah, Eccles Institute of Human Genetics, 10 North 2030 East, Room 2420, Salt Lake City, UT 84112.** *The University of Utah is an Equal Opportunity/Affirmative Action Employer.*

PREDOCTORAL AND POSTDOCTORAL TRAINING PROGRAM IN REPRODUCTIVE SCIENCES

The University of Kentucky is recruiting **PREDOCTORAL** and **POSTDOCTORAL TRAINEES** for an NIH-supported training program in the Reproductive Sciences. Applicants must be U.S. citizens or permanent residents. Faculty are from the Departments of Animal Science, Anatomy & Neurobiology, Biochemistry, Pharmacology, Physiology, OB-GYN, and Vet Science with diverse research interests in the reproductive sciences at the molecular, cellular, and whole animal level. For further information, please contact: **Dr. Tom Curry, Department of OB-GYN, University of Kentucky, Lexington, KY 40536. Telephone: 606-323-6166; FAX: 606-323-1931.** *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer and encourages applications from qualified women and minorities.*

POSTDOCTORAL TRAINING in developmental neurobiology. Position available to study growth and differentiation of mammalian primary sensory neurons involved in cardiorespiratory control. Studies focus on epigenetic regulation of neurotransmitter phenotype and growth factor regulation of sensory neuron survival using *in vitro* and *in vivo* methods. Experience with molecular techniques, including Northern blot, PCR and/or *in situ* hybridization preferred. Please send résumé, reprints and names of three references to: **Dr. David M. Katz, Department of Neurosciences, Case Western Reserve University School of Medicine, 10900 Euclid Avenue, Cleveland, OH 44106.** *An Affirmative Action/Equal Opportunity Employer.*

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SUMMER FELLOWSHIPS, Ocean Remote Sensing–June 5 to August 25, 1995. Offered by the University of Maryland, Sea Grant Program and NASA, for advanced undergraduate and beginning graduate students; includes stipend, housing, travel. Deadline: 1 April 1995. For application: **Maryland Sea Grant, 0112 Skinner Hall, University of Maryland, College Park, MD 20742. Telephone: 301-405-6371.** *An Equal Opportunity/Affirmative Action Employer.*

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RESEARCH ASSOCIATE

Applications are invited for a **RESEARCH ASSOCIATE** to participate in murine corneal transplantation research. Surgical experience required. Send curriculum vitae and three references to: **Jay S. Pepose, M.D., Ph.D., Washington University School of Medicine, Department of Ophthalmology, Box 8096, 660 South Euclid Avenue, St. Louis, MO 63110 USA.**

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The Gordon Research Conferences manages international meetings concerning science at the cutting edge of fundamental research in the biological, chemical, and physical sciences. We have an immediate need for an individual with a combination of a science and business background. Relevant job experience might involve broad experience in marketing to a specialized scientific community, data base/mailing list development, and good graphic/lay-out skills and experience.

A good candidate for the position would have a M.S. degree in the sciences, a M.B.A. degree, and several years of marketing experience related to the science research community. The **STAFF MEMBER** must be willing to work as a team member with the Gordon Conference core staff, with the Board of Trustees and Committee members of the organization, with a wide variety of Conference Chairs and operational site staff, and participate in travel related to conference operations.

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RESEARCH TECHNICIANS

The Coulston Foundation's Department of Comparative Toxicology and Metabolism is seeking applications for **RESEARCH TECHNICIANS**. Positions involve participation in the overall conduct of a variety of government and privately sponsored toxicology research projects involving non-human primates, as well as other laboratory research species.

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ANNOUNCEMENTS

RESEARCH OPPORTUNITY
NATIONAL MAPPING DIVISION DATA GRANT PROGRAM FOR LAND PROCESSES RESEARCH

The United States Geological Survey's National Mapping Division (USGS/NMD), Department of Interior, is distributing limited amounts of remotely sensed satellite data at no cost to qualified non-profit organizations that will apply these data to land processes research. Digital data available through the Program include advanced very high resolution radiometer (AVHRR) data and Landsat multispectral scanner (MSS) data with coverage limited to the coterminous United States, Alaska, and Hawaii. A committee of National Mapping Division researchers will review the data grant applications.

NMD Data Grant Program awardees must sign a data rights agreement to become USGS affiliated users. In exchange for using NMD Data Grant Program data, awardees will be required to submit reports summarizing the use of the data products in land processes research.

For more information on submitting a data grant request, send for an NMD Data Grant Program information packet:

Data Grant Program
Science & Applications Branch
U.S. Geological Survey
EROS Data Center
Sioux Falls, SD 57198

Deadline for receipt of data grant requests is April 1, 1995.

CAREER CHANGE OPPORTUNITY

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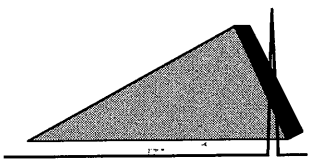

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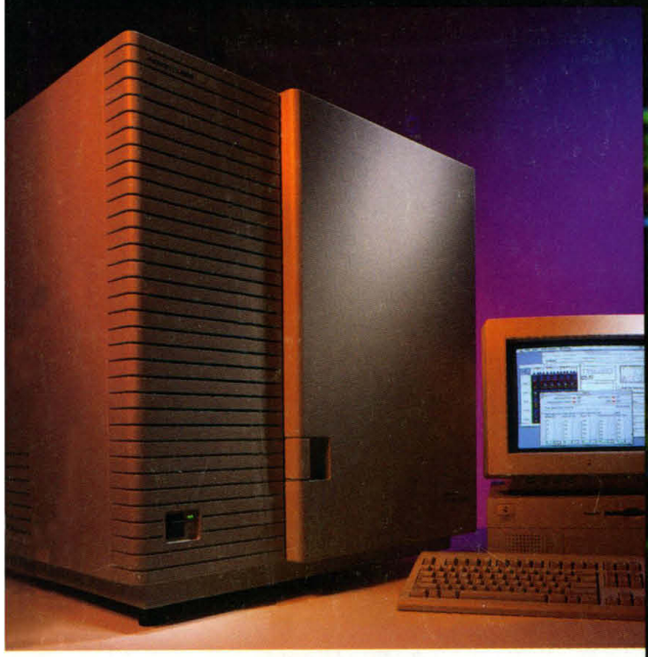

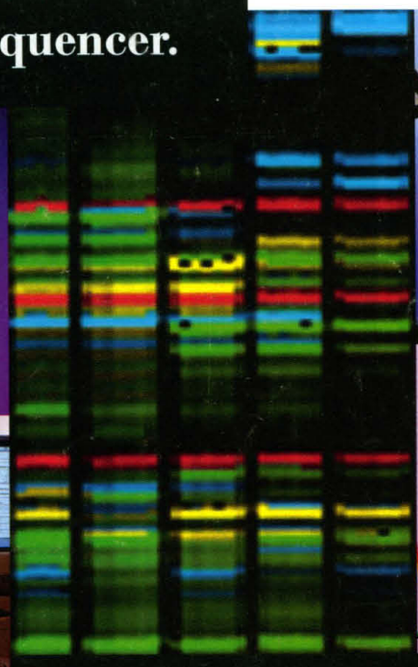

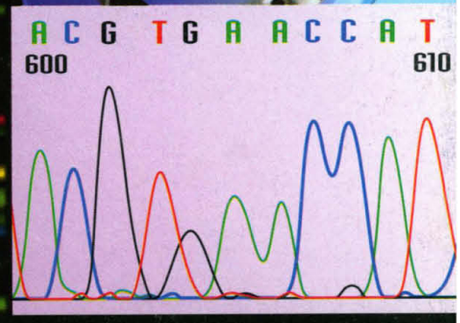

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