

# Gordon research conference programs

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## Immunochemistry and immunobiology

February 4-9, 1996

Holiday Inn, Ventura, CA, USA

### Lymphocyte development: part I

Diane Mathis, INSERM/Strasbourg, France: **Positive selection of CD4+ T cells**

Bernard Malissen, INSERM/Marseille-Luminy, France: **Control of pre-T cell development**

David Schatz, HHMI/Yale University, USA: **Differentiation of  $\alpha\beta$  versus  $\gamma\delta$  T cells**

### Lymphocyte development: part II

Frederick Alt, HHMI/Children's Hospital, USA: **Mutational analysis of T cell development**

Katia Georgopoulos, Massachusetts General Hospital, USA: **Duelling fingers in Ikaros proteins**

Margorie Oettinger, Massachusetts General Hospital, USA: **Biochemistry of V-D-J recombination**

### Cell death in the immune system

Shigekazu Nagata, Osaka University Medical School, Japan: **Fas-mediated cell death mechanisms**

Tak Mak, Ontario Cancer Institute, Canada: **Thymocyte negative selection**

Craig Thompson, HHMI/University of Chicago, USA: **Differential roles of lymphokine and Bcl-2 related genes in controlling lymphocyte survival**

Yuri Lazebnik, Cold Spring Harbor Laboratories, USA: **Molecular mechanisms of cell execution**

### Nonconventional recognition by T cells

Kirsten Fischer-Lindahl, HHMI/University of Texas Southwestern Medical Center, USA: **Title TBA**

Michael Brenner, Harvard Medical School, USA: **Non-protein antigen presentation to T cells by CD1 molecules**

HR MacDonald, Ludwig Institute of Cancer Research, Switzerland: **Development and Function of NK1<sup>+</sup> T cells**

### Recognition by natural killer cells

Eric O Long, NIAID/NIH, USA: **Diversity and specificity of killer cell inhibitory receptors**

William Seaman, VAMC/UCSF, USA: **Pathways of inhibition through NK lectin-like receptors**

Lewis Lanier, DNAX Research Institute, USA: **Inhibitory MHC receptors on human NK and T lymphocytes**

David Raulet, University of California, Berkeley, USA: **Development and function of MHC-specific NK subsets**

### Co-stimulation of lymphocytes

Jeffrey Bluestone, University of Chicago, USA: **CD28/B7 Interactions regulate the development and progression of autoimmune disease**

Arlene Sharpe, Brigham and Women's Hospital, USA: **Dissecting the *in vivo* function of the CD28/B7 co-stimulatory pathway using B7-deficient mice**

Garnett Kelsoe, University of Maryland, USA: **Role of co-stimulation in the development of Ig hypermutation and T cell memory**

### Antigen presentation to T cells

Antonio Lanzavecchia, Institut für Immunologie, Switzerland: **title TBA**

Per Peterson, RW Johnson Pharmaceutical Research Institute, USA: **Class I antigen processing and presentation**

Dennis Zaller, Merck Research Laboratories, USA: **Role of HLA-DM in antigen processing**

Ronald Germain, NIAID/NIH, USA: **Consequences of T cell receptor engagement by variant MHC-peptide ligands**

### AIDS

Andrew McMichael, John Radcliffe Hospital, UK: **Subversion of the anti-HIV immune response**

Didier Trono, The Salk Institute, USA: **Intracellular trafficking in HIV infection**

George Shaw, University of Alabama, USA: **Viral dynamics in HIV-1 infection**

### **Signal transduction/transcriptional regulation**

Gerald Crabtree, HHMI/Stanford University, USA: **title TBA**

Victor Tybulewicz, National Institute of Medical Research, UK: **The role of vav and syk in lymphocyte: development and function**

Dan Littman, HHMI/UCSF, USA: **Tyrosine kinases and lineage specification in thymocyte development**

Roger Perlmutter, HHMI/University of Washington, USA: **Distinct signals govern positive and negative selection**

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Applications may be found in the October 13 issue of Science.

Conference chair:  
David H Raulat,  
MCB — LSA 489  
University of California, Berkeley  
Berkeley, CA 94720, USA

**Oxygen radicals in biology**  
**February 11–16, 1996**  
**Doubletree Hotel**  
**Ventura, CA, USA**

### **Oxygen radicals and air pollution**

Carroll E Cross, University of California at Davis, USA: **Introduction to oxygen radicals & air pollution.**

Henry Jay Forman, University of Southern California, USA: **NO<sub>2</sub> — Signaling by an environmental hazard**

Donald J Massaro, Georgetown University School of Medicine, USA: **Environmental oxidants and lung cells — the oxygen toxicity model**

Kenneth B Adler, North Carolina State University, USA: **Ozone — signal transduction and molecular responses**

### **Health benefits of plant-derived antioxidants**

Peter M Bramley, University of London, England: **Genetic manipulation of the carotenoid synthetic pathway**

Wolfgang Schuch, Zeneca Plant Science, England: **Genetic modification of tomatoes**

Wolf Bors, Institut Strahlenbiologie, Germany: **Flavonoids: prooxidants or antioxidants?**

David Leake, University of Reading, England: **Interactions of flavonoids with oxidized LDL: implications for atherosclerosis *in vivo***

### **Debates**

1) **Do carotenoids act as antioxidants *in vivo*?**

2) **Are the flavonoid constituents of foods relevant antioxidants *in vivo*?**

Discussants include: Lester Packer, University of California, Berkeley, USA and Norman Krinsky, Tufts University Medical School, USA

### **Oxygen radicals & aging**

Raj S Sohal, Southern Methodist University, USA: **Is oxidative stress a causal factor in the aging process?**

Lora E Rikans, University of Oklahoma, USA: **Lipid peroxidation, antioxidant protection, and aging**

Vincent J Cristofalo, Medical College of Pennsylvania, and Hahnemann University, USA: **Alterations in gene expression resulting from oxidative stress and aging**

Caleb Finch, University of Southern California, USA: **Free radicals, oxidative stress, brain aging, and Alzheimer's disease**

Charles Epstein, University of California, San Francisco, USA: **The effects of altered SOD activity in aging**

Rick Weindruch, University of Wisconsin, USA: **Caloric intake, free radicals and mitochondrial aging**

### **Oxygen radicals, inflammation and ischemia/reperfusion injuries**

David Wink, DCT/NCI/NIH, USA: **Oxidant-induced cytotoxicity: modulation by reactive metabolites of oxygen and nitrogen**

Tony Manning, Upjohn Laboratories, USA: **Role of oxidants in the NF- $\kappa$ B mediated regulation of inflammation**

Paul Kubes, University of Calgary, Canada: **A balance between nitric oxide and oxidants regulates**

**leukocyte-endothelial cell interactions in inflammation**

Alex Sevanian, University of Southern California, USA: **Derangement of phospholipid remodeling and repair pathways by ischemia and reperfusion**

Sharon Wahl, NIDR/NIH, USA: **Free radicals and inflammatory joint disease**

Harry Nick, University of Florida, USA: **Molecular regulation of MnSOD by inflammatory cytokines and LPS**

**Oxygen radicals, growth arrest, apoptosis and cancer**

Enrique Cadenas, University of Southern California, USA: **Reactive oxygen species generated by anti-cancer quinones induce p21 in tumor cells**

Catherine Pasquier, INSERM/Paris, France: **Role of oxygen radicals in polymorphonuclear cell apoptosis**

Angelo Azzi, University of Bern, Switzerland: **Control of cell proliferation by  $\alpha$ -tocopherol**

Dana R Crawford, Albany Medical College, USA: **Transient growth arrest during adaptation to oxidative stress**

Sten Orrenius, The Karolinska Institute, Sweden: **Redox regulation of apoptotic cell death**

Applications may be found in the October 13 issue of *Science* or requested from the conference chair:

Kelvin JA Davies  
Department of Biochemistry  
and Molecular Biology,  
The Albany Medical College  
Albany, NY 12208, USA  
Tel: 518 262 5364 Fax: 518 262 5689

**Chemistry and biology of peptides**  
February 18-23, 1996  
Doubletree Hotel  
Ventura, CA, USA

**Chemical/biological interfaces**

Peter G Schultz, University of California, Berkeley, USA: **Lessons from the immune system: from catalysis to material science**

Steven K Burley, Rockefeller University, USA: **Structure/function studies of the obesity hormone leptin**

**Novel synthetic approaches**

Daniel H Rich, University of Wisconsin, USA: **Peptidomimetics derived from natural products: synthesis and properties**

Barbara Imperiali, California Institute of Technology USA: **Causes and consequences of asparagine-linked glycosylation**

K Barry Sharpless, Scripps Research Institute, USA: **Asymmetric synthesis of amino acids**

Murray Goodman, University of California, San Diego, USA: **Enantioselective peptidomimetics: lanthionine building blocks in drug design**

**Receptor-ligand interactions**

Terry D Reisine, University of Pennsylvania, USA: **Structure/function analysis of peptide receptors**

Todd Somers, Genentech, Inc., USA: **Minimal bioactive conformation of peptidic growth hormone secretagogues**

Peter W Schiller, Clinical Research Institute of Montreal, Canada: **Opioid peptides and peptidomimetics as pharmacological tools and potential drugs**

**Combinatorial drug discovery**

Jack Baldwin, Pharmacoepia, Inc., USA: **From solid phase peptide synthesis to small molecule combinatorial libraries**

Eric M Gordon, Affymax, USA: **Combinatorial organic synthesis: applications to drug discovery**

Roger Tung, Vertex Pharmaceuticals, USA: **Confluence of combinatorial and rational drug design**

Richard A Houghten, Houghten Pharmaceuticals, USA: **The 'libraries from libraries' concept for generation of soluble peptidomimetic and organic combinatorial libraries**

**Peptide templates**

Arno F Spatola, University of Louisville, USA: **Chemistry and biology of cyclic peptides**

Victor J Hruby, University of Arizona, USA: **Exploring topographical space in *de novo* design: prospects and problems**

M Reza Ghadiri, Scripps Research Institute, USA: **Peptide nanotubes**

### **Peptide design**

Andrew Hamilton, University of Pittsburgh, USA: **Design, synthesis and evaluation of peptidomimetic inhibitors of ras farnesyltransferase: a new class of anti-tumor agents**

Jean Chmielewski, Purdue University, USA: **Dissociation of dimeric proteins: a novel means of enzyme inhibition**

Daniel F Veber, SmithKline Beecham Pharmaceuticals, USA: **Studies of solid phase methodology for peptidomimetic libraries**

James A Wells, Genentech, Inc., USA: **Shrinking proteins to peptides**

### **Peptides in immunobiology and inflammation**

Mark M Davis, Stanford University, USA: **Biological and chemical aspects of T-Cell recognition**

Hidde L Ploegh, Massachusetts Institute of Technology, USA: **Creative use of peptides in immunology**

Douglas K Miller, Merck Research Laboratories, USA: **Role of ICE family of cysteine proteases in IL-1 activation and apoptosis**

### **Peptides as structural models**

Neville Kallenbach, New York University, USA: **Peptide models for dissecting alpha-helical stability**

Clare Woodward, University of Minnesota, USA: **NMR characterization of folding intermediates made by peptide synthesis**

Peter T Lansbury, Jr, Massachusetts Institute of Technology, USA: **Amyloid formation in Alzheimer's disease and scrapie**

Timothy A Keiderling, University of Illinois at Chicago, USA: **Conformational studies of peptides using optical spectroscopy**

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Applications may be found in the October 13 issue of *Science* or requested from the conference co-chairs:

Charles M Deber  
Research Institute — Biochemistry  
Hospital for Sick Children/University of Toronto  
555 University Avenue  
Toronto, Ontario M5G 1X8, Canada  
Tel: 416 813 5924 Fax: 416 813 5005

John A Smith,  
Department of Pathology  
The University of Alabama at Birmingham  
619 South 19th Street, WP P230  
Birmingham, AL 35233-7331, USA  
Tel: 205 934 6421 Fax: 205 975 4468