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# 1992 FASEB SUMMER

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## Saxtons River, Vermont

**PROTEIN FOLDING AND ASSEMBLY IN THE CELL** June 7-12 Chairs: Randy Schekman, UC-Berkeley and Carolyn Machamer, Johns Hopkins Univ. Med. Sch. **Theoretical Aspects of Protein Folding. Folding of Model Proteins. Genetic Studies of Folding. Cellular Proteins Involved in Protein Folding. Folding and Protein Translocation Across Membranes. Folding and Secretion in Eukaryotes. Assembly of Multisubunit Complexes. Post-translational Modifications and Folding. Misfolding, Aggregation and Intracellular Degradation.**

**RETINOIDS** June 14-19 Chairs: Peter J. A. Davies, Univ. of Texas, Houston and A. Catherine Ross, Med. Col. of Pennsylvania. **Chairman's Lectureship.** W. Bollag. **Biology of Retinoid Receptors.** R. Evans, P. Chambon, V. Giguere, P. Davies, F. Chytil. **Retinoid-regulated Morphogenesis.** G. Eichele, S. Bryant, E. deRobertis, E. Boncinelli, T. Jessel. **Molecular Mechanisms of Retinoid Action.** M. Pfahl, M.G. Rosenfeld, L. Gudas, K. Shudo. **Retinoids in Human Cancer.** H. DeThe, R. Warrel, A. Jetten, W.K. Hong, L. DeLuca, K. Norum. **Retinoid Metabolism.** D. Ong, J. Napoli, R. Rando, R. Chandraratna, A. Levin, U. Erikson. **Retinoid Effects in the Immune and Inflammatory Systems.** A.C. Ross, U. Hammerling, M. Klein, C. Brinkerhoff, M. Pacifici. **Retinoids and Disorders of Cutaneous Differentiation.** B. Shroot, D. Roop, A.B. Roberts, J. Voorhees, J. Olson.

**BIOLOGY AND CHEMISTRY OF VISION: VISUAL PROCESSING** June 21-26 Chairs: John E. Dowling, Harvard Univ. and Richard H. Masland, Massachusetts Gen. Hosp. **Release and Uptake of Neurotransmitters.** E. Schwartz, D. Attwell, M. Tachibana. **Mechanisms of Neurotransmitter Release and Uptake.** F. Werblin, P. Malchow, M. Kamermans, S. Eliasof. **Postsynaptic Actions of Neurotransmitters and Modulators.** D. Copenhagen, C. Jahr, R. Taylor, P. Witkovsky. **Retinal Development.** R. Fernald, C. Cepko, T. Rey. **Cultured Retinal Neurons: What Can be Learned from Them?** G. Fain, J. Dowling, A. Kaneko, A. Ishida. **Retinal Cell Mosaics.** H. Wässle, D. Vaney, P. Sterling, D. Williams. **Implications of Retinal Processing.** P. Schiller, J. Maunsell. **Modelling Retinal Function.** J. Lisman, F. Werblin. **New Approaches for Understanding Retinal Function.** D. Baylor, M. Meister, K-W. Yau.

**RENAL HEMODYNAMICS: INTERACTIONS WITH ENDOTHELIAL AND EPITHELIAL SYSTEMS** June 28-July 3 Chairs: L. Gabriel Navar, Tulane Univ. Sch. of Med., Donald J. Marsh, USC Sch. of Med., William Arendshorst, Univ. North Carolina-Chapel Hill and Franklyn Knox, Mayo Fndn. **Membrane Activating and Transduction Mechanisms in Renal Vascular Cells.** J. Bonventre, D. Harder, A. Kurtz, B. Ballerman, R. Loutzenhiser. **Endothelial Interactions.** L. Raij, J.C. Romero, C. Baylis, W. Anderson. **Cellular Mechanisms of Angiotensin Effects and Interactions with Other Systems.** R. Blantz, P. Carmines, S. Ito, R. Ardaillou, J. Douglas. **Neural Interactions and Intrarenal Hormones.** G. DiBona, B. Carey, U. Kopp, J. Fleming. **Tubuloglomerular Feedback Interactions with Tubular Transport and Myogenic Mechanism.** E. Persson, J. Schnermann, D. Cassellas, D. Bell. **Dynamics of Hemodynamic-tubular Interactions.** D. Marsh, N. Hostlein-Rathlou, P. Leyssac. **Lipid and Kinin Mediators Altering Hemodynamic and Tubular Function.** W. Arendshorst, J. McGiff, R. Roman, C. Wilcox. **Interactions with Excretory Mechanisms: Pressure Natriuresis, Interstitial and Medullary Factors.** F. Knox, J. Granger, A. Khraibi, A. Nasjletti. **Integrative Long Term Control of Renal Hemodynamics.** J. Hall, T. Peterson, H. Kirchkeim.

**CALCIUM AND CELL FUNCTION** July 5-10 Chairs: Kevin P. Campbell, Univ. of Iowa and Howard Schulman, Stanford Univ. Med. Ctr. **Calcium as a Second Messenger.** D. Gill, J. Putney, A. Thomas. **Regulation of Calcium Pumps, Carriers and Leak Channels.** G. Inesi, M. Hanley, R. Steinhardt, K. Philipson. **Calcium Oscillations.** S. Smith, D. Friel. **Molecular Properties of Voltage Dependent Calcium Channels.** R. Tsien, T. Snutch, K. Campbell, M. Harpold. **Intracellular Calcium Release Channels.** T. Sudhof, R. Coronado, L. Jones, B. Ehrlich. **Neuronal Calcium Regulation.** R. Miller, S. Sigelbaum, J. Ramachandran, B. Bean. **Calcium Dependent Kinases and Phosphatases.** H. Schulman, C. Klee, J. Stull. **Calcium Regulation of Gene Expression and Development.** W. Busa, M. Greenberg, D. Goldman, G. Crabtree. **Calcium Regulation of Fertilization.** F. Longo, H.C. Lee, S. Shen, L. Jaffee.

**PHOSPHOLIPASES** July 13-17 Chairs: Edward A. Dennis, UCSD and Mary F. Roberts, Boston Col. **Phospholipase Structure and Mechanism.** P.B. Sigler, E.A. Dennis, B.W. Dijkstra, R. Verheij. **Cytosolic Phospholipase A2.** R.M. Kramer, C.C. Leslie, J.D. Clark. **Phospholipase C.** M.F. Roberts, H.J. Volwerk, M-D. Tsai, P.T. Englund. **Phospholipases C and D.** S.G. Rhee, G. Carpenter, M.M. Billah. **Function of Extracellular and Secretory Phospholipase A2.** P. Elsbach, K. Inoue, J. Weiss, H. Arita, R. Crowl. **Calcium-independent Phospholipases.** R.W. Gross, S. M. Prescott, H. Chap. **Role of Phospholipases in Tissues.** H. van den Bosch, M. Okamoto, E. Schuchman, P. Rosenberg. **Interaction of Phospholipases with Phospholipid Interfaces.** G. de Haas, R.L. Biltonen, M.H. Gelb, M.K. Jain. **New Functions for Phospholipases.** M. Waite, R.L. Wykle, M.G. Low.

**VITAMIN C AND VITAMIN E IN FREE RADICAL REACTIONS** July 19-24 Chairs: Richard C. Rose, Chicago Med. Sch. and Mary Carpenter, Oklahoma Med. Res. Fndn. **Free Radical and Antioxidant Fundamentals. Cellular Regenerations of Vitamins C and E. Transport and Distribution of Vitamins C and E. Free Radical Generation and Antioxidant Functions in Biological Systems. Defense Mechanisms in Pathology. Clinical Applications of Antioxidants. Recent Developments with Antioxidants.**

**VIRAL ASSEMBLY** July 26-31 Chairs: Roger M. Burnett, Wistar Inst., Sherwood R. Casjens, Univ. of Utah Med. Ctr. and Patricia G. Spear, Northwestern Univ. Med. Sch. **Three-dimensional Structures of Mature Virions.** D.L.D. Caspar, T.S. Baker, S.D. Fuller, R. McKenna, A.C. Steven, P.L. Stewart. **Viral Receptors and Entry.** P.G. Spear, J.M. Cunningham, U. Henning, K. Holmes, D. Johnson, V. Rancaniello. **Protein Folding, Processing and Maturation.** E. Wimmer, M. Chow, J.A. King, A. Molla, M.D. Ryan, A. Wlodawer. **Capsid Assembly in RNA Viruses.** T.M. Schuster, E. Hunter, R. Rueckert, G. Stubbs, J. Summers, V. Vogt. **RNA Packaging.** L. Mindich, D. Bamford, D. Ganem, K. Kirkegaard, J.E. Johnson, R. Wickner. **Capsid Assembly in DNA Viruses.** W. Gibson, S.C. Harrison, R. Hendrix, H. Lindqvist, H. Murialdo, B.V. Prasad. **DNA Packaging.** S.R. Casjens, D. Anderson, A. Becker, P. Serwer, J. Dunn, P. Hearing. **Envelope Assembly and Budding.** R. Compans, L.W. Enquist, D.S. Lyles, D.P. Nayak, G. Griffiths, G. Wertz. **Therapeutic Strategies.** M. Schlesinger, P. Berman, J.M. Hogle, M.G. Rossman, J. Gordon, M. Bryant.

**FOLIC ACID, VITAMIN B-12 AND ONE CARBON METABOLISM** August 2-7 Chairs: Rowena G. Matthews, Univ. of Michigan and Robert H. Allen, Univ. of Colorado Med. Ctr. **Biosynthesis of Folic Acid and Cobalamin Derivatives.** J. Roth, C. Walsh, B. Nichols, A. Bacher. **Binding and Transport of Cobalamin, Folate and Antifolate Derivatives.** C. Wagner, B. Seetheram, B. Kamen, F.M. Huennekens, D.W. Horne. **Structural and Functional Studies on Cobalamin and Folate-dependent Enzymes.** R.G. Matthews, A. Marlewski, F. Ledley, P. Leadlay. **Clinical Aspects of B-12 and Folate Deficiency.** J. Lindenbaum, R. Carmel, R.H. Allen, K. Rasmussen. **Dihydrofolate Reductase and Thymidylate Synthase.** D.V. Santi, D.A. Matthews, C. Oefner, F. Maley, J. Bertino. **Compartmentation of Folate Metabolism: A Symposium in Honor of Robert Stokstad.** B. Shane, R. Stokstad, D. Appling, R. MacKenzie. **Biology of Homocysteine.** R.H. Allen, M.S. Hershfield, J. Kraus, P. Ueland, H. Refsum, I. Graham. **Adenosylmethionine, One Carbon and Polyamine Metabolism.** J. Coward, P. Frey, G.D. Markham, E. Newman. **Emerging Chemotherapeutic Targets.** P. Beardslley, R. Ferone, I.K. Dev, A. Jackman.

**THROMBIN: STRUCTURE AND FUNCTION** August 9-14 Chair: Lawrence J. Berliner, Ohio State Univ. **X-ray Structure.** W. Bode, A. Tulinsky, J. Birktoft, B. Edwards. **Structure in Solution.** L.J. Berliner, J.C. Powers, D.M. Tollefson, H.A. Scheraga, S. Coughlin. **Specificity.** J.W. Fenton, II, E. Van Obberghen-Schilling, R. Bar-Shavit, A. Malik, D. Carney. **Signal Pathways.** E. Lapetina, J.G.N. Garcia, D. Cunningham, J. Gerrard. **Cellular Responses/Thrombin-like Enzymes.** D. Walz, P. Tracy, R. McGillivray. **Thrombin Pathways.** K. Mann, R. Carrell, F. Ofusu, Y. Nemerson. **Synthetic Inhibitors.** S. Okamoto, S. Stone, R. Knabb, F. Ni. **Recombinant and Biological Inhibitors.** S. Stone, J. Maraganore, R.B. Wallis. **Pharmacology, Applied Physiology.** N. Bang, M. Runge.

# RESEARCH CONFERENCES

 **Copper Mountain, Colorado** 

**TRANSCRIPTION REGULATION: DIFFERENTIATION, DEVELOPMENT AND DISEASE** June 14-19 Chairs: Bruce Spiegelman, Harvard Med. Sch. and Michael Green, Univ. of Massachusetts Med. Ctr. **Transcriptional Mechanisms I.** P. Sharp, M. Green, R. Roeder, D. Reinberg. **Transcriptional Mechanisms II.** S. McKnight, L. Guarente, K. Struhl, R. Kingston. **Signal Transduction and Hormones I.** T. Hunter, M. Montminy, T. Roberts, M. Cobb. **Signal Transduction and Hormones II.** J. Goldstein, L. Gudas, F. McCormick, G. Crabtree. **Tissue Specific Transcription I.** D. Baltimore, U. Shibley, E. Olson, H. Blau. **Tissue Specific Transcription II.** W. Wright, B. Spiegelman, S. Orkin, R. Cortese. **Nuclear Oncogenes.** R. Eisenmann, M. Karin, D. Livingston, W. El-Derry. **Vertebrate Development I.** J. Smith, M. Mercola, E.E. DeRobertis, G. Eichele. **Vertebrate Development II.** J. Rossant, M. Capecchi, A. Bradley, P. Gruss.

**MICRONUTRIENTS: TRACE ELEMENTS** June 21-26 Chairs: Mark L. Failla, Univ. North Carolina-Greensboro and K. Michael Hambidge, Univ. of Colorado Hlth. Sci. Ctr. **Regulation of Trace Element Absorption.** R.J. Cousins, J. Madara, B. Lonnerdal. **Cellular Acquisition of Trace Metals.** E.D. Harris, A. Smith, J. Glass, P. Aisen. **Intracellular Metabolism of Trace Metals.** M. Linder, M.J. Ettinger, J.D. Gitlin, D.R. Winge. **Trace Elements and Gene Expression I.** J.F.B. Mercer, T.C. Stadtman, R.A. Sunde. **Trace Elements and Gene Expression II.** E.C. Theil, J. Hartford, R. Rucker. **Workshops: Metal-metal Interactions:** J. Greger, K.T. Smith. **Trace Elements as Anti- and Pro- Oxidants:** T. Bray, R. DiSilvestro. **Stable Isotopes and Whole Body Metabolism:** P. Johnson, R. Serfass. **What Can Yeasts and Fungi Tell Us About Human Trace Metal Metabolism?** D. Kosman, D. Eide. **Functions of Trace Elements I.** B. O'Dell, J. Arthur, J. Beard, W.T. Johnson, W.J. Bettger. **Functions of Trace Elements II.** J. Prohaska, D. Medirus, S. Brem, J. Milner, C. Keen. **Whole Body Metabolism of Trace Elements.** J. King, P. J. Fennessey, M.J. Jackson, J.D. Cook, M. Janghorbani.

**NEUROBIOLOGY OF CENTRAL NERVOUS SYSTEM INJURY** June 28-July 3 Chairs: Myron D. Ginsburg, Univ. of Miami Sch. of Med. and John T. Povlishock, Med. Col. of Virginia. **Critical Appraisal of Utility of Head and Spinal Cord Injury Models.** E.D. Means, D. Graham, T. Genarelli, T.K. McIntosh. **Critical Appraisal of Utility of Neural Injury Models.** W. Young, P. Muizelaar, L. Jenkins, T.E. Anderson. **Techniques for Assessing Neural Injury.** J.A. Jane, J.T. Povlishock, B. Lyeth, H. Levin. **Pathophysiology I.** D.K. Anderson, G. Feuerstein, E.M. Johnson. **Pathophysiology II.** M.A. Moskowitz, M.Y.T. Globus, W.D. Dietrich. **Roundtable on Oxygen Radicals.** H. Kontos, P. Chan, J. Beckman, B.D. Watson. **Repair Mechanisms I.** R.P. Dunge, O. Steward. **Repair Mechanisms (and Therapy) II.** M.D. Norenberg, J. Silver. **Therapeutic Aspects.** G. Clifton, P.J. Reier, P. Safar, R.J. Traystman.

**MOLECULAR BASIS OF GASTRIC MUCOSAL DEFENSE** July 5-10 Chairs: Lenard Lichtenberger, Univ. of Texas Med. Sch., Houston and Thomas Miller, Univ. of Texas Med. Sch., Houston. Organizing Comm.: Paul H. Guth, UCLA Sch. of Med., Eugene D. Jacobson, Univ. of Colorado Sch. of Med. and Sandor Szabo, Harvard Univ. Med. Sch. **Opening Comments.** L. Lichtenberger. **Surface Mucus Barrier of the Stomach.** A. Allen, A. Slomiany, G. Morris. **Biophysical Properties of Mucus in Health and Disease.** L. Lichtenberger, B. Slomiany. **Regulation of Intracellular and Interstitial Environment.** T. Machen, L. Cheung, W. Silen, P. Guth, K. Rainsford. **Microcirculation and Mucosal Sensory Nerves.** P. Guth, S. Szabo. **Poster Session I.** L. Lichtenberger, P. Guth. **Mediators of Mucosal Injury and Inflammation.** N. Granger, P. Kviety, J. Wallace. **Memorial to Dr. Andre Robert.** E. Jacobson, P. Guth. **Concept of Cytoprotection.** Viewing of Dr. Robert's Last International Lecture. Retrospective Analysis by Different Observers after 15 Years. T. Miller, E. Jacobson, W. Silen, S. Szabo and L. Lichtenberger. **Poster Session II.** S. Szabo, T. Miller. **Importance of Cell Restitution and Growth in Mucosal Defense.** E. Lacy, L. Johnson, S. Szabo. **New Developments in Gastric Pathophysiology and Management.** D. McCarthy, S. Dajani, S. Szabo, L. Lichtenberger.

**RECEPTORS AND SIGNAL TRANSDUCTION** July 12-17 Chairs: C. Ronald Kahn, Harvard/Joslin Diabetes Ctr. and William T. Schrader, Baylor Col. of Med. **G-Protein Coupled Receptors and Their Signals.** M. Gershengorn, E. Ross, M. Caron, D. Segaloff, M. Forte. **Receptors and Signal Transduction in the Immune System.** R. Klausner, A. Weiss, J. Cambier. **Self-contained Signaling Systems: Receptor Kinases and Cyclases.** J. Schlessinger, D. Garbers, J. Massague, C.R. Kahn. **SH2 Domains and Intracellular Signals from Membrane Receptors.** L. Williams, M.F. White, T. Pawson. **Accessory Factors and Phosphorylation in Activation of Nuclear Receptors.** W. Chin, H. Samuels, N. Weigel, G.M. Rosenfeld. **Genetic Analysis of Nuclear Receptors.** W.T. Schrader, M. Garabedian, D. McDonnell, E. Wilson. **Contact Initiated Receptor Signaling Systems.** T. Springer, A. Brian, P. Besmer. **Keynote Address.** E. Robertson. **Receptors and Receptor-like Molecules for Growth Hormone and Anti-growth Hormones.** M. Barbacid, P.A. Kelly, N. Tonks.

**PROTEIN PHOSPHATASES** July 19-24 Chairs: Shirish Shenolikar, Duke Univ. Med. Ctr. and David Brautigan, Brown Univ. **Opening Lecture.** E. H. Fischer. **Phosphorylation of Nuclear Proteins and Transcription Factors.** T. Hunter, M. Mumby, G. Walter, J. Nevins, D. DeFranco. **Phosphorylation of Receptors and Ion Channels.** A. Nairn, M. Welsh, R. Huganir, I. Levitan, L.J. Miller. **Growth Regulation.** D. Brautigan, M. Yanagida, H. Pivnicka-Worms, N. Tonks, W. Dunphy. **Tumor Promoters, Toxins and Phosphatase Inhibitors.** E.Y.C. Lee, S. Shenolikar, D. Brautigan, J. Eriksson, A. Boynton. **Protein Phosphatases in Non-vertebrates.** R. Kincaid, J. Dixon, P. Cohen, C. Mackintosh, M. Cyert. **Protein Phosphatases and Hormone Action.** W. Merlevede, W. Stalmans, P. Cohen, A. DePaoli-Roach, J. Lawrence. **New Developments - Protein Phosphatases and Regulators.** A. DePaoli-Roach, B. Hemmings, C. Klee, B. Neel, J. Goris. **T-cell Signalling.** N. Tonks, C. June, M. Thomas, D. Cool, I. Trowbridge. **Closing Remarks.** S. Shenolikar.

**PHYSIOLOGY AND PATHOPHYSIOLOGY OF THE SPLANCHNIC CIRCULATION** July 26-31 Chairs: Ching-Chung Chou, Michigan State Univ. and Peter Kviety, LSU Med. Ctr. **Chemical Modulators of Gastrointestinal Blood Flow.** C.C. Chou, H.G. Bohlen, P. Kadowitz, J. Wallace, G. Bulkley, O. Hottenstein. **Interactions Between Neural and Local Mechanisms of Vasoregulation.** E.D. Jacobson, A.P. Shepherd, J.E. Faber, J.H. Lombard, V.M. Miller. **Molecular and Cellular Basis of Microvascular Functions.** H.J. Granger, M. Davis, W. Schilling, F.R. Curry, S. Silverstein, J. Diana. **Microvasculature and Gastrointestinal Mucosal Injury: Role of Blood Flow and Vascular Permeability.** A.E. Taylor, P. Guth, S. Szabo, P. Holzer, F. Leung. **Microvasculature and Gastrointestinal Mucosal Injury: Role of Angiogenesis.** P.R. Kviety, M. Ziche, C. Meininger, W. Alexander, L.R. Johnson, A. Tarnawski. **Role of the Circulation in Inflammatory Bowel Disease.** J. Wallace, R. Wechsler, F. Shanahan, M.B. Grisham, R.E. Pounder, P. Kubes. **Hepatic Circulation and Metabolism.** C. Goresky, W. Lutt, C. Rothe, R. Thurman, K. Jungermann, M. Henderson. **Alcohol Effects on the Liver and G.I. Tract.** J.J. Spitzer, R. Thurman, C.S. Lieber, F.J. Carmichael, R. McCuskey. **Portal Hypertension.** D.N. Granger, R. Groszman, J. Bosch, J. Benoit, J. Sarfeh.

**REGULATION OF ENERGY BALANCE: FROM ORGANISM TO GENE** August 2-7 Chairs: David A. York, Pennington Biomed. Res. Ctr., Barbara Horwitz, UC-Davis and Robert Eckel, Univ. of Colorado Hlth. Sci. Ctr. **Regulation of Energy Balance in Animals and Humans.** T. Bartness, J. Hill, E. Ravussin. **Genetic Basis for Changes in Body Composition.** M. Stunkard, C. Bouchard, R. Liebel. **Regulation of Food Intake and Diet Selection.** A. Campfield, T. Powley, J. Fernstrom, S. Liebowitz, B. Horwitz. **Central Integration of Feeding and Autonomic Activity.** B. Levin, G. Bray, A. Scalfani. **Peripheral Responses to Feeding.** J. Young, D. Westfall, D. Ricquier, A. Astrup, B. Kahn. **Molecular Biology of Receptors.** S. Cushman, A. Strosberg, W. Vedeckis, D. Accili. **Nutrient Partitioning.** R. Martin, J-P. Flatt, M.R.C. Greenwood, R. Eckel, D. York, A. Kissebah. **Cytokines - Current Understanding.** M. Kluger. **Regulation of Fat Cell Development.** P. James, G. Ailhaud, J. Kirkland, B. Spiegelman, P. Cannon.

**PLANT MOLECULAR GENETICS** August 9-14 Chairs: Rob Horsch, Monsanto Co. and Jonathan Jones, Sainsbury Lab., UK. **Genetic Analysis of Development.** E. Coen, E. Meyerowitz, J. Schiefelbein, S. Dellaporta, C. Dean. **Molecular Genetics of Development.** C. Gasser, R. Pruitt, G. Jurgens, S. Poethig, M. Yanofsky. **Hormone Action.** T. Blecker, M. Estelle, J. Ecker, A. Binns, H. Klee. **Genetic Techniques and Hot Poster Topics.** J. Odell, P. Benfey. **Genetic Analysis of Signal Transduction: Transcriptional Activation.** V. Chandler, T. Peterson, D. McCarty, C. Martin, S. Hake. **Biochemical Genetics/Disease.** L. Willmitzer, W-D. Reiter, S. Briggs, D. Shah. **Arabidopsis as a Model System for Plant Pathogen Interactions.** F. Ausubel, B. Staskawicz, J. Dangl, M. Daniels, S. Somerville, A. Slusarenko, E. Holub, E. Ward. **Genetic Analysis of Signal Transduction: Plant Disease Resistance.** J. Jones, R. Fluhr, P. Ronald, S. Somerville, T. Pryor, J. Ellis, J. Jones. **Transposable Elements.** H. Dooner, R. Martienssen, R. Kunz, A. Gierl, P. Chomet. **Genome Structure and Analysis.** S. Tingey, R. Michelmore, P. Heslop-Harrison, H. Goodman, E. Richards. **Enigmatic Genetics: Transgene Genetics, Cosuppression, Paramutation.** R. Jorgensen, P. Meyer, S. Wessler, J. Kermicle, D. Schwartz.

# 1992 FASEB SUMMER RESEARCH CONFERENCES



**YEAST CHROMOSOME STRUCTURE, REPLICATION AND SEGREGATION** July 5-10 Chairs: James Haber, Brandeis Univ., Kerry Bloom, Univ. North Carolina-Chapel Hill, and Breck Byers, Univ. of Washington. **Keynote Address: S. pombe Chromosome Structure and Segregation.** M. Yanagida. **Chromosome and Nuclear Architecture.** W. Garrard, S. Gasser, F. Thoma, M. Grunstein. **Workshop: Yeast Genome Sequencing Analysis.** S. Oliver, B. Dujon, R. Davis, D. Beach. **DNA Replication.** J. Huberman, W. Fangman, C. Newlon, D. Kowalski. **DNA Replication; G1/S Control.** B. Stillman, J. Campbell, S. Reed, L. Johnston. **Telomeres and Position Effects.** B-K. Tye, V. Zakian, D. Gottschling, J. Rine. **Centromeres.** L. Clarke, J. Carbon, D. Koshland, T. Hyman. **Mutational Analysis of Chromosome Stability.** M. Fitzgerald-Hayes, P. Hieter, V. Larionov, P. Hegeman. **Mitotic Apparatus.** M. Rose, A. Hoyt, M. Winey, M. Snyder. **Meiotic Chromosome Recombination and Segregation.** S. Roeder, D. Kaback, N. Kleckner, R.E. Esposito. **G2/M Control; DNA Damage Control.** T. Weinert, A. Murray, B. Futcher, D. Beach.

**HEPATIC REGENERATION AND CARCINOGENESIS: MOLECULAR AND CELLULAR PATHWAYS** July 12-17 Chairs: Randy Jirtle, Duke Univ. Med. Ctr. and George Michalopoulos, Duke Univ. Med. Ctr. **Signal Transduction and Early Gene Expression During Hepatocyte Proliferation.** J. Exton, A. Thomas, R. Dubois, R. Taub. **Genetic Therapy in the Liver.** B. Huber, G. Wu, S. Woo. **Growth Factors in Liver Regeneration and Carcinogenesis I.** N. Bucher, G. Michalopoulos, T. Nakamura, C. Scott, A. Strain. **Growth Factors in Liver Regeneration and Carcinogenesis II.** N. Fausto, B. Carr, W. Russell, R. Jirtle, P. Godowski. **Viruses and Hepatocarcinogenesis.** F. Chisari, C. Rogler, M-A. Buendia, J. Butel, J. Wands. **Oncogenes/Tumor Suppressor Genes and Hepatocarcinogenesis.** S. Thorgeirsson, S. Hirohashi, M. Anderson, S. Strom. **Transgenic Animal Models in Liver Carcinogenesis.** H. Pitot, N. Drinkwater, E. Sandgren, G. Merlino. **Liver Tumor Promotion.** J. Yager, D.S.R. Sarma, J. Popp, S. Green. **Hepatic Stem Cells and Cell Lineages.** J. Grisham, A. Sirica, D. Hixson.



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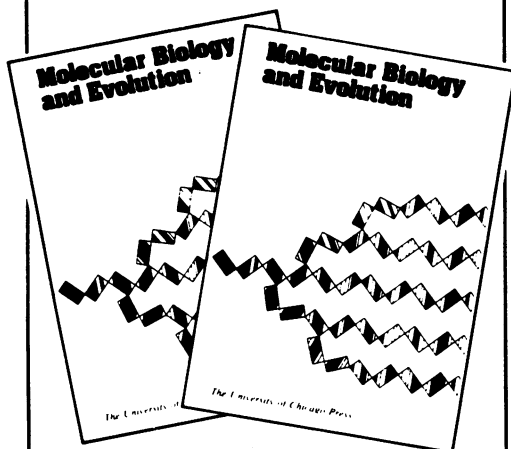
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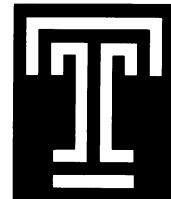
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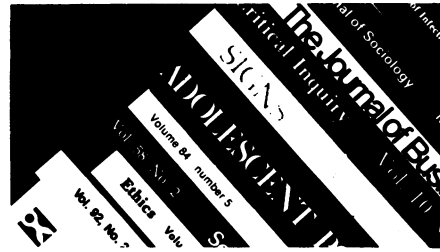
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