

**Markers.** L. Landmesser; **Neurite Outgrowth—Cellular Mechanics.** N. Spitzer, P. Lefoumean, K. Pfenninger, C. Lance-Jones; **—Pathfinding.** L. Landmesser, C. Goodman, J. Palka, U. Rutishauser; **Development of Voltage-Dependent Ion Channels.** N. Spitzer, C. Bader, G. Strichartz, S. Siegelbaum; **Development of Neurotransmitter-Activated Channels.** L. Landmesser, E. Cooper, N. Nathanson; **Biochemical Correlates of Development—Neurotransmitter Synthesis.** N. Spitzer, S. Landis, I. Black, J. Barker; **—Hormonal Triggers and the Roles of Surface Molecules.** L. Landmesser, P. Patterson, J. Sanes; **Specificity of Neuronal Connections.** N. Spitzer, W. Thompson, D. Purves, S. Easter, E. Frank.

#### **GASTROINTESTINAL DIFFERENTIATION (July 21–26)**

Chairman: Lenard M. Lichtenberger, University of Texas Medical School/Houston

Vice-chairman: Susan J. Henning, University of Houston  
**General Discussants:** F. Moog, E. Lebenthal, D. Alpers, R. Lester, P. Sunshine; **Molecular and Cellular Mechanisms of GI Ontogeny.** K. Haffen, G. Teitelman, J. Gordon, P. Colony; **Ontogeny of GI Endocrine Cells.** A. Pearse, L. Lichtenberger, A. Andrews, J. Polak; **Innervation and Motility of the Developing Gut.** M. Gershon, Y. Ruckebusch, F. Morriss; **Development of Immune and Barrier Properties of the GI System.** J. Trier, M. Neutra, R. Rodewald, W. Walker; **Development of the Salivary and Pancreatic Secretion.** R. Redman, W. Ball, L. Cutler, J. Morisset, J. Jamieson; **Development of the Gastric Secretion.** L. Johnson, J. Forte, E. Dial; **Development of Intestinal Digestion.** S. Henning, K.-Y. Yeh, D. Menard, G. Gall; **Development of Intestinal Absorption.** O. Koldovsky, S. Toverund; **GI Differentiation in the Adult.** N. Kretchmer, R. Grand, A. Zweibaum, J. Madara.

#### **MECHANISMS OF CARCINOGENESIS (July 28–August 2)**

Chairman: Charles Sherr, St. Jude Children's Research Hospital

Vice-chairman: Ellen Vitetta, University of Texas Southwestern Medical School

**Oncogenes and Transforming Genes I.** H. Hanafusa, J. Brugge, I. Verma, C. Sherr, T. Deuel; **Receptors and Hormones I.** M. Brown, T. Hunter, G. Carpenter, I. Pastan, A. Ullrich; **Hematopoietic Transformation.** C. Berard, T. Graf, A. Bernstein, O.

Witte, D. Boettiger; **New Therapeutic Modalities.** A. Nienhuis, P. Martin, E. Vitetta, P. Thorpe; **Promotion, Chemicals, Radiation and Drug Resistance.** W. Haseltine, V. Ling, N. Colburn; **Host Response to Tumors.** M. Greene, R. Lynch, G. Nicolson, J. Forman; **Receptors and Hormones II.** C. Weissmann, K. Smith, T. Waldmann, G. Todaro, B. Ozanne; **Oncogenes and Transforming Genes II.** P. Leder, R. Eisenman, D. Lowy, G. Cooper, P. Neiman; **Insertional Mutagenesis and Enhancer Elements.** R. Jaenisch, G. Peters, G. Vande Woude, G. Khoury.

#### **PROTEIN KINASES (August 4–9)**

Chairman: James Niedel, Duke University Medical Center

Vice-chairman: Jyh-Fa Kuo, Emory University School of Medicine

**Opening Address:** P. Greengard. **Evening Address:** I. Pastan. **Protein Kinase C.** J. Kuo, R. Bell, P. Blumberg, W. Anderson; **Calmodulin Protein Kinase.** R. Adelstein, A. Means, R. Tsien; **Phosphatases.** C. Klee, E. Fischer, D. Brautigan; **Substrates.** P. Blakeshear, L. Williams, J. Garrison, J. Cooper; **Receptor Phosphorylation.** R. Lefkowitz, R. Klausner, P. Liebman; **Signal Generation.** E. Lapetina, J. Williamson, L. Cantley, M. Smigel; **Gene Regulation.** D. Granner, R. Maurer, M. Rosenfeld, M. Greenberg; **Receptor Kinases.** S. Aaronson, W. Pledger, R. Davis.

#### **BIOLOGY & CHEMISTRY OF VISION (August 11–16)**

Chairman: Paul A. Hargrave, University of Florida Health Center

Vice-chairman: Meredith Applebury, Purdue University

**Rhodopsin Structure, Function and Topography.** P. Hargrave, J. Findlay, R. Liu; **Visual Pigment Gene Structure.** M. Applebury, H. Khorana, J. Nathans; **Applications of Molecular Biology to the Study of Vision.** D. Bridges, J. Hurley, J. Piatigorsky; **Biochemistry of Visual Transduction.** P. Liebman, H. Kuehn, N. Goldberg, B. Fung; **Models for Visual Transduction.** E. Bownds, J. Brown, J. Korenbrot, R. Cote, J. Lisman; **Retinoid Metabolism and Transport.** J. Saari, D. Bridges, D. Bok, G. Chader, R. Rando; **Developmental Biology of the Retina.** D. Papermaster, C. Barnstable, I. Nir, S. Zipursky, J. Besharse; **Visual System Membranes: Components and Properties.** R. Cone, R. Molday, P. Witt, N. Colley; **Ionic Basis of Photoreceptor Transduction.** D. Baylor, K.-W. Yau.