

PROGRAM

Wednesday, October 10

- 4:00 - Early Registration in Hotel Lobby
7:00 pm
- 7:00 Social gathering with refreshments in the Auditorium of the La Jolla Cancer Research Foundation.
Transportation will be provided.

Thursday, October 11

- 7:00 am Registration, Coffee, Visit Exhibits
- 8:30 **Welcome and Announcements**
Minoru Fukuda, Ph.D. and Hudson H. Freeze, Ph.D.
- SESSION I:** ***Structure and Biosynthesis of N- and O-Glycans***
Chairman: Harry Schachter, M.D., Ph.D. *Sponsored by Oxford Glycosystems*
- 8:40 **Structure Determination of Glycoprotein-Derived Carbohydrates**
Dr. Hans F.G. Vliegenthart
- 9:10 **Developments in the Analysis of Glycolipids and Oligosaccharides; Linkage, Sequence and Branching (SFC-NCI-MS)**
Dr. Vernon Reinhold
- 9:40 **The Role of Glycosylation in Glycoprotein Hormone Function**
Dr. Jacques U. Baenziger
- 10:10 **Rabbit and Human UDP-GlcNAc:α-3-D-Mannoside β(1,2)-GlcNAc-transferase I: Cloning and Characterization of the Gene**
Dr. Harry Schachter
- 10:40 Coffee Break, Visit Exhibits, Poster Viewing
- Selected Speakers from Session I***
Chairman: Hudson H. Freeze, Ph.D.
- 11:00 **Determining Distance and Flexibility within Triantennary Glycopeptide by Fluorescence Energy Transfer**
Dr. Kevin G. Rice

- 11:15 **Refined Chemical Techniques for the Quantitative Recovery of Intact N- and O-Linked Oligosaccharides from Glycoproteins**
Dr. Charles Warren
- 11:30 **Topology of the Poly- α 2,8-Sialyltransferase in *E. coli* K1 and Energetics of Polysialic Acid Chain Translocation Across the Inner Membrane**
Dr. Frederic A. Troy
- 11:45 **Microsomal Topography of the GlcNAc-Transferases which Catalyze the Biosynthesis of GlcNAc-P-P-Dolichol and (GlcNAc)₂-P-P-Dolichol**
Dr. Edward L. Kean
- 12:00 noon **Characterization of a Novel Fucosyltransferase Activity in Dictyostelium**
Dr. Chris M. West
- 12:15 pm Lunch
- SESSION II:** ***Cellular and Molecular Biology of Mucins***
Chairman: Young S. Kim, M.D.
- 1:30 **Porcine Submaxillary Mucin**
Dr. Robert L. Hill
- 2:00 **Cloning Studies on BSM and Canine Tracheal Mucin**
Dr. Eugene A. Davidson
- 2:30 **Human Intestinal Mucin Core Proteins**
Dr. Young S. Kim
- Selected Speakers from Session II***
- 3:00 **Utilization of a Unique Nucleotide Probe to Identify cDNA Encoding Human Tracheobronchial Mucin Glycoprotein**
Dr. Mary C. Rose
- 3:15 **Regulation of Colon Carcinoma Sialomucin Expression**
Dr. Tatsuro Irimura
- 3:30 Poster Viewing and Visit Exhibits

SESSION III:	<i>Glycosphingolipid Modulating Cell Growth and Transmembrane Signalling</i>
Chairman:	Sen-itiroh Hakomori, M.D., Ph.D.
4:30	Ganglioside-Modulated Protein Phosphorylation Systems Dr. Kai-Foon Jesse Chan
5:00	The Role of Ganglioside GM1 in Cell Growth and Signal Transduction Pathways Dr. Sarah Spiegel
5:30	Role of Ganglioside and its Catabolite in the Modulation of Transmembrane Signal Transduction Dr. Sen-itiroh Hakomori
Chairman:	<i>Selected Speakers from Sessions IV, VI and I</i> Ajit Varki, Ph.D.
6:00	Molecular Genetic Basis of the Histo-Blood Group ABO System Dr. Fumi-ichiro Yamamoto
6:15	Cloning, Sequence and Expression of Hamster UDP-GlcNAc: Dolichol Phosphate GlcNAc-1-P Transferase Dr. Mark A. Lehrman
6:25	Cloning and Characterization of GlcNAc-1-P Transferase cDNA from Mouse Mammary Glands Dr. Bhanu Rajput
6:35	Discussion
6:40	Site-Directed Mutagenesis of <i>Escherichia coli</i> CMP-N-Acetylneuraminic Acid Synthetase Dr. Gerardo Zapata
6:55	Modifications of Biological Activities of Interleukin-2 by Chemical Glycosylation Dr. Subramaniam Sabesan
7:10	Modulation of Lactoside-binding Lectins During Differentiation of Embryonal Carcinoma Cells Dr. Reuben Lotan
7:25	Adjourn

Friday, October 12

SESSION IV: *Molecular Biology of Glycosyltransferase and Carbohydrate Processing Enzymes*

Chairman: James C. Paulson, Ph.D.

7:30 am Coffee, Visit Exhibits, Poster Viewing

8:30 **β 1,4-Galactosyltransferase: Two Tails/Tales of a Transferase**
Dr. Joel H. Shaper

9:00 **The Molecular Nature of a Null Allele of the H α (1,2)-Fucosyltransferase Gene in a Bombay (O_h) Individual**
Dr. John Lowe

9:30 **Molecular Biology of Mammalian Processing Mannosidases**
Dr. Kelley Moremen

10:00 **Control of Glycosylation Machinery**
Dr. James C. Paulson

10:30 Coffee Break, Visit Exhibits, Poster Viewing

SESSION V: *Pathobiology of Glycosylation*

Chairman: Akira Kobata, Ph.D.

11:00 **HEMPAS, Genetic Defect in Glycoprotein Glycosylation**
Dr. Michiko N. Fukuda

11:30 **Role of Sulfated Glycoconjugates in Tumor Cell Interactions with Thrombospondin and Laminin**
Dr. David D. Roberts

12:00 noon **Altered Glycosylation of Surface Glycoproteins in Tumor Cells and its Clinical Application**
Dr. Akira Kobata

12:30 pm Lunch

Selected Speakers from Session IV

1:30 **Molecular Pathways that Dictate Gal(β 1-4)GlcNAc α (2-6)-Sialyltransferase Gene Expression**
Dr. Joseph T.Y. Lau

- 1:45 **Expression-Cloning of cDNAs that Rescue Genetic Defects in Chinese Hamster Ovary Cell Glycosylation Mutants**
Dr. Michael Heffernan
- 2:00 **Isolation of a Specific Processing α -Mannosidase Gene from *Saccharomyces Cerevisiae***
Dr. Anne Camirand
- 2:15 **The Golgi Apparatus Localization/Retention Signal Is Located in the Stem Region of the β -Galactoside α 2,6-Sialyltransferase**
Dr. Karen J. Colley
- 2:25 **Subcellular Localization of β 1,4-Galactosyltransferase (GT)**
Dr. Daisuke Aoki
- 2:35 Discussion
- 2:40 Coffee Break, Visit Exhibits, Poster Viewing
- SESSION VI:** ***Synthetic Chemistry in Glycobiology***
Chairman: Ole Hindsgaul, Ph.D.
- 3:00 **Synthetic Oligosaccharides and the Antibody Binding Site for the Salmonella Serogroup B Polysaccharide: A Comparison of Ligand Mapping Studies with a High Resolution Crystal Structure**
Dr. David R. Bundle
- 3:30 **Enzymes in Carbohydrate Synthesis**
Dr. Chi-Huey Wong
- 4:00 **Synthetic Chemistry and Glycobiology of L-Fucose**
Dr. Khushi L. Matta
- 4:30 **Applications of Synthetic Carbohydrate Chemistry to the Study of Glycosyltransferases**
Dr. Ole Hindsgaul
- 5:00 Poster Viewing and Visit Exhibits
- 7:00 - 7:45 **Plenary Lecture: "Processing of Murine Glycophorins"**
Dr. George E. Palade
- 7:45 Banquet (optional event - ticket required)

Saturday, October 13

SESSION VII: *Glycoprotein Processing and Targeting*

Chairman: Minoru Fukuda, Ph.D. *Sponsored by Chugai-Upjohn Inc.*

7:30 am Coffee, Visit Exhibits, Poster Viewing

8:30 **Biosynthesis of Glycophosphatidyl Inositol Membrane Anchors**
Dr. Gerald Hart

9:00 **Glucosylation of Glycoproteins in the Endoplasmic Reticulum**
Dr. Armando J. Parodi

9:30 **Control of Glycoprotein Processing and Terminal Glycosylation**
Dr. Richard D. Cummings

10:00 **Biosynthesis and Targeting of Polylactosaminoglycan-containing Glycoproteins**
Dr. Minoru Fukuda

Selected Speakers from Session VII

10:30 **Two New Inhibitors of the Glycoprotein Processing Mannosidases, Mannosidase I and Mannosidase II**
Dr. Alan D. Elbein

10:45 **Engineered Glycans to Identify a Vacuolar Sorting Determinant in Phytohemagglutinin-L**
Dr. Craig D. Dickinson

11:00 **Effect of Inhibitors of N-Linked Oligosaccharide Processing on Opsin Glycosylation and Rod Outer Segment Disc Membrane Morphogenesis**
Dr. Steven J. Fliesler

11:15 Special Coffee Break, Visit Exhibits, Poster Viewing

SESSION VIII: *Proteoglycans*

Chairman: Erkki Ruoslahti, M.D.

11:45 **The Adhesive Phenotype of Transfected Cells Indicates that CD44 May Be a Hyaluronic Acid Receptor**
Dr. Thomas St. John

- 12:10 pm **Vascular Addressins: Tissue-specific Endothelial Cell Ligands for Lymphocyte Homing Receptors**
Dr. Ellen L. Berg
- 12:35 **Biglycan (BGN) and Decorin (DCN): Sequence and Tissue Distribution**
Dr. Larry W. Fisher
- 1:00 **Role of Heparan Sulfate Proteoglycan in Regulation of Cell Growth**
Dr. H. Edward Conrad
- 1:25 **Proteoglycans in Cell Regulation**
Dr. Erkki Ruoslahti
- Selected Speakers from Session VIII*
- 1:55 **The Sulfate Activation Pathway in Rat Chondrosarcoma**
Dr. Stephen Lyle
- 2:10 **Developmentally Regulated Chondroitin Sulfate Proteoglycans of Brain Characterized with Monoclonal Antibodies**
Dr. Richard U. Margolis
- 2:25 Final Adjournment