

The 24th Meeting of the Society for Glycobiology was held in Boston, Massachusetts from 23–26 November 1996. The chairman of the organizing committee was Dr Vernon Reinhold.

The meeting was initiated on Saturday evening with a Plenary Lecture by S. Kornfeld on the Regulation of Mannose Phosphorylation of Lysosomal and Secretory Glycoproteins. He presented the results of his intensive research on the substrate specificity of the committed enzyme, the GlcNAc-P transferase, which synthesizes the recognition marker directing lysosomal enzymes to their proper intracellular compartment. It is now apparent that the substrate recognition site for the GlcNAc-P transferase is quite complex and involves far more than primary peptide sequence. The substrate recognition site appears to involve a large portion of the lysosomal enzyme surface, but exact details of the complete substrate recognition site have yet to be resolved.

Each morning session then began with two Perspective Lectures followed by Salient Topic Symposia. The Perspective lecture speakers included P. Robbins on Oligosaccharide Signaling, D. Harn on Oligosaccharide Modulation of the Immune Response, H.P. Hauri on Golgi Recycling Pathways, D. Williams on Calnexin, R. Jefferis on The Effects of Antibody Glycosylation and M. Brenner on Antigen-specific Recognition of Glycolipids by T lymphocytes.

The Salient Topics covered a wide range of subject matter from control of glycosyltransferase gene expression and localization (N. Shaper, K. Colley), early processing pathways of N-linked oligosaccharides (R. Spiro), the functions of glycolipids and glycosylphosphatidylinositol (GPI) anchors (C. Lingwood, T. Seyfried, M. Ferguson), therapeutic glycoconjugates, inhibitors of carbohydrate function and bacterial binding to carbohydrate receptors (E. Tuomanen, L. Kiessling), carbohydrates and glycosyltransferases modulating cell adhesion (I. Stamenkovic, S. Hakomori, J. Lowe) and the role of sugars on IgG (R. Dwek). The wide range of topics and large number of speakers precludes a detailed description of each talk; the overall theme was generally directed to demonstrating the importance of carbohydrates as recognition markers for biological processes.

The Perspective Lectures were then followed by a number of symposia on specific topics including; biosynthesis of proteoglycans, glycosylation of proteins in insect cells,

structure, regulation and disease aspects of glycosyltransferase genes, glycoprotein sulfation, functions of glycoproteins as selectin ligands, glycosphingolipids in differentiation and development, inhibitors of glycosidases and glycan processing, role of glycosylation and lectins in cancer, glycosylphosphatidylinositols and lectins of parasites, glycoprotein processing and catabolism, ER chaperone proteins, milk oligosaccharide structures and possible roles, functions of hyaluronans and bacterial polysaccharides as well as their action in disease. Many new exciting results include the distribution of alpha 6-sialyltransferase throughout the Golgi (K. Colley) and O-GlcNAc modification of tumor suppressor proteins in the DNA binding region (R.S. Haltiwanger).

It is generally expected that any recent meeting on glycoconjugates will include topics on selectins and other carbohydrate recognition molecules, biological and structural functions for sugars on individual glycoproteins, GPI anchors, and the further cloning and expression of various glycosyltransferases and glycosidases. Symposia on the structures and functions of parasite glycoproteins have also been part of most recent meetings dealing with glycoconjugates. It was interesting to note the topics of therapeutic glycoconjugates, their targeting, and also an entire session devoted to studies on bacterial polysaccharides and lipopolysaccharides, thus demonstrating the recent concerns with emerging and reemerging infectious agents and antibiotic resistant bacteria. Finally it is important to note that although most of the enzymes involved in glycoprotein synthesis and processing are membrane proteins, as well as many of their macromolecular substrates, the effects of a membrane environment on the activities of these enzymes was hardly mentioned during this meeting. It should be remembered that membranes of the endoplasmic reticulum and Golgi not only pose steric barriers to the recognition of some substrates, but charged phospholipids in the membranes could also have major effects on enzyme activities by binding divalent cations or other effectors of enzyme activity.

The social program included the presentation of a Glycobiology song (with the tune of O'Susanna and lyrics by I. Brockhausen) chaired by H. Schachter, V. Reinhold, R.

Trimble, G. Hart and J. Schutzbach. Since there has been a great demand for the lyrics, they are printed here with the hope for more of this kind at the next meetings.

- 1 I come from Alabama,
Man and GlcNAc on my knee
I'm goin' to a Boston Glyco date,
my colleagues for to see.
It rained all night on the day I left,
the GlcNAc it was dry
The Man so hot it froze to death,
my colleagues don't you cry?

Glycofellows oh don't you cry for me
For I come from Alabama,
with Man and GlcNAc on my knee.

- 2 I come from upper Canada,
with a poster on my knee
I only show the published work,
my colleagues for to see.
Since I got burned I worry about,
the data that I draw
And I fudge the numbers better now,
without a single flaw.

Glycofellows oh don't you cry for me
For I come from upper Canada
with a poster on my knee.

- 3 I come from France, the Glycoland,
mass spectra on my knee
I'm goin' to the USA,
Glycopinion for to see.
I drank French wine on the day I left,
and Champagne very dry
This helps us to communicate,
and great ideas to fly.

Glycofellows oh don't you cry for me
For I come from France the Glycoland,
mass spectra on my knee.

- 4 I come from California,
glycocatalogue on my knee
I'm goin' to Glycoscience now,
to learn how sweet to be.
The sugars are invaluable,
for glycodinner time
For therapy of cancer though,
they are not worth a dime.

Glycofellows oh don't you cry for me
For I come from California,
glycocatalogue on my knee.

- 5 I'm made of glycoconjugates,
with lectins on my knee
My head is glycolipid-filled
and that's no way to be.
I only practice glycosex,
with adhesion molecules
My receptors kiss the glycocalyx,
with alien glycorules.

Glycofellows oh don't you cry for me
For I'm made of glycoconjugates,
with lectins on my knee.

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