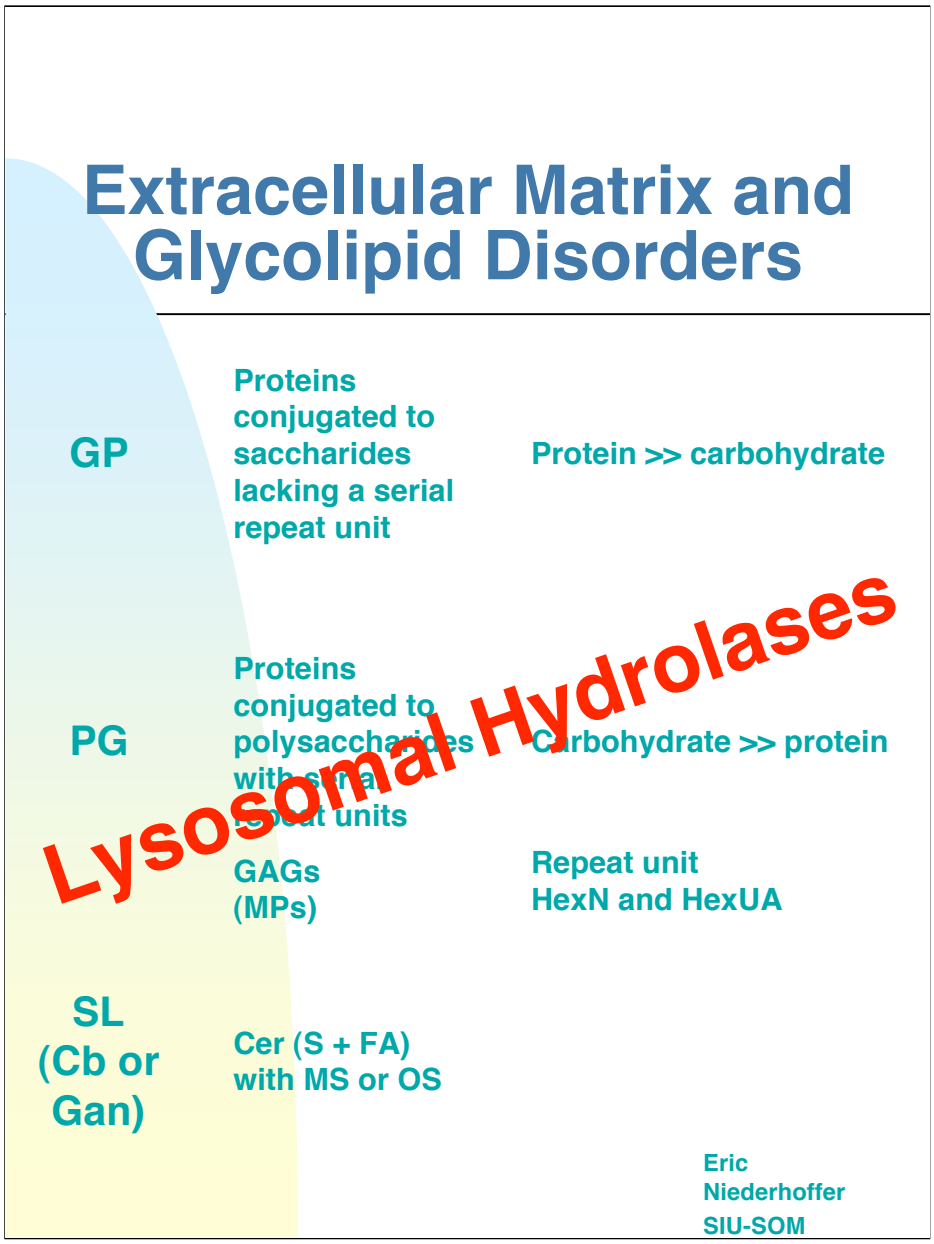
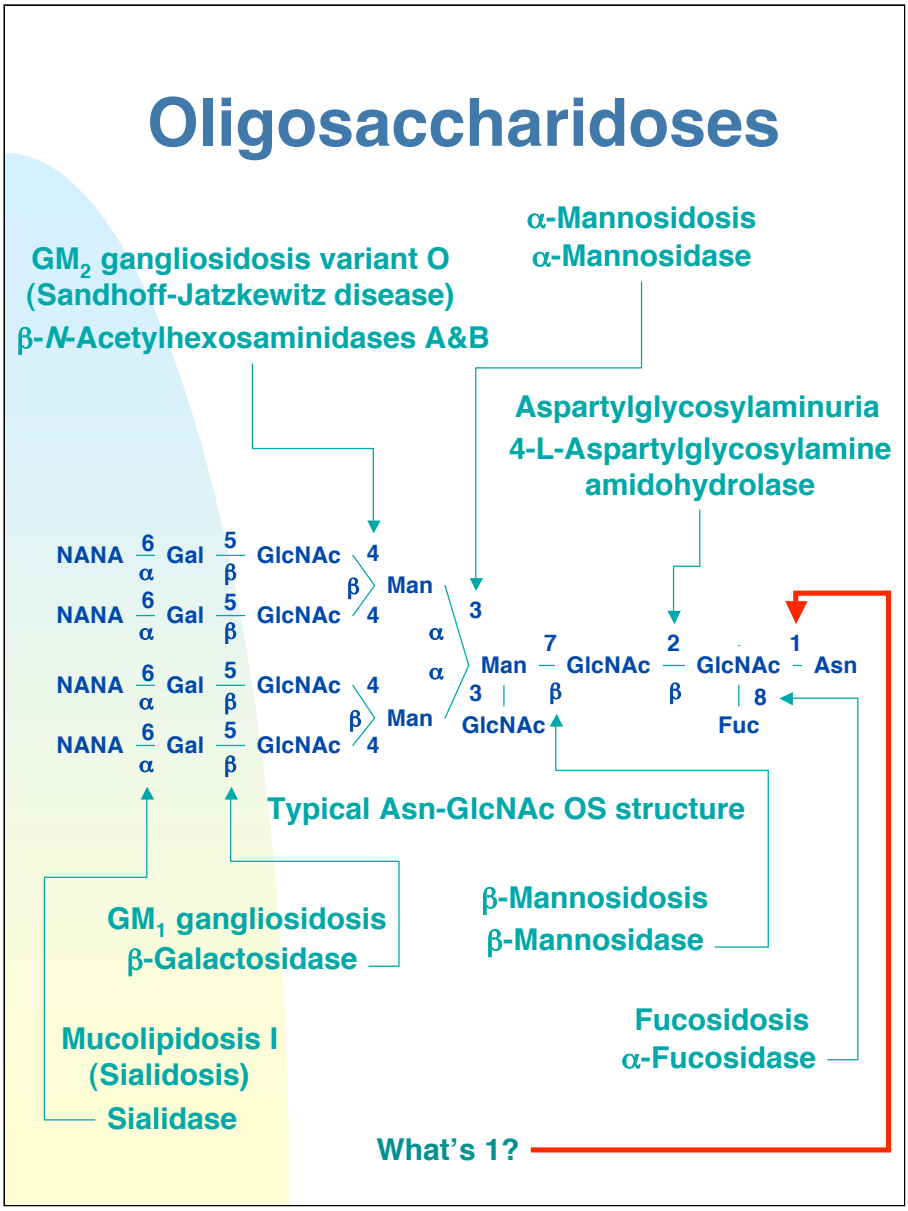


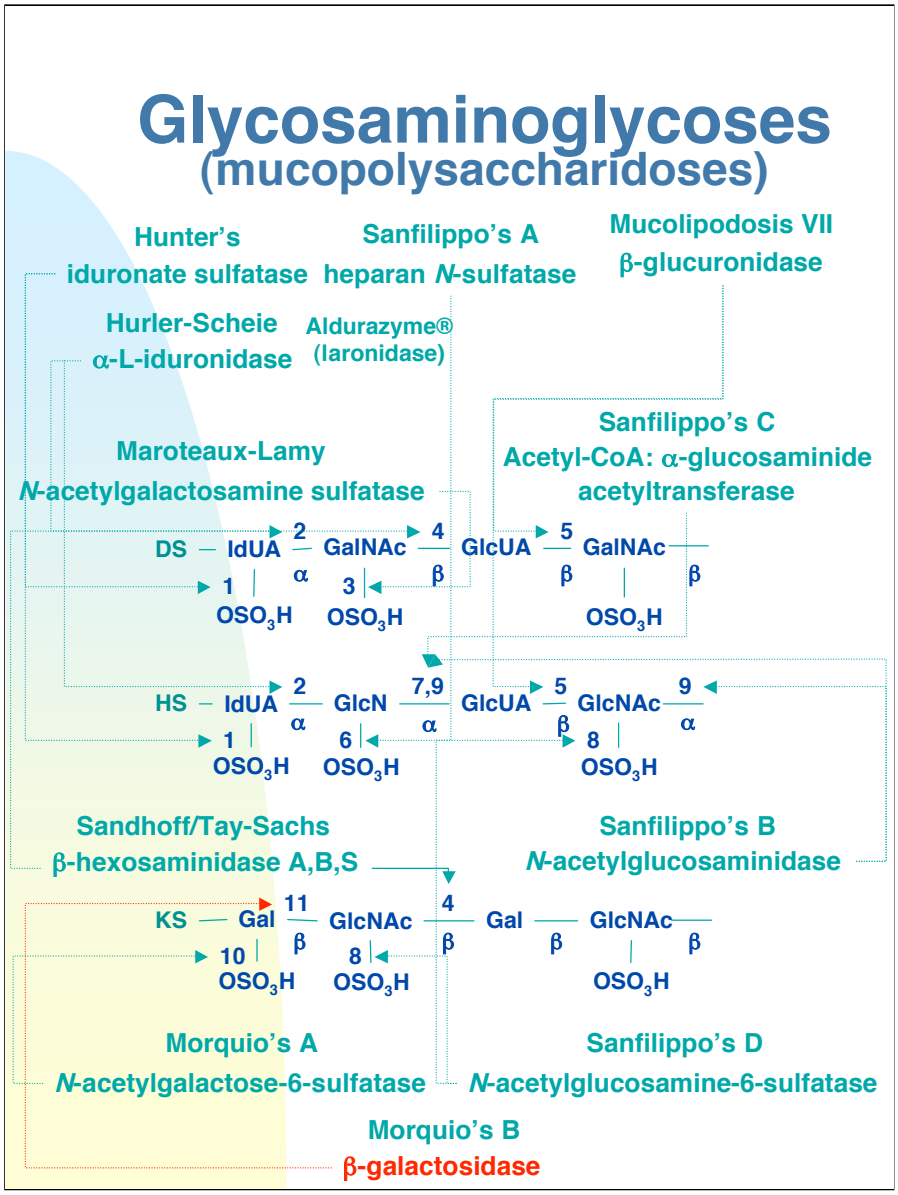

**GP** glycoprotein
**PG**: proteoglycan
**GAG**: glycosaminoglycan
**MP**: mucopolysaccharide
**HexN**: hexosamine
**HexUA**: hexose uronic acid
**SL**: sphingolipid
**Cb**: cerebroside
**Gan**: ganglioside
**Cer**: ceramide
**S**: sphingosine
**FA**: fatty acid
**MS**: monosaccharide
**OS**: oligosaccharide




**NANA**: *N*-acetylneuraminic acid (sialic acid) **Gal**: galactose

**GlcNAc**: *N*-acetylglucosamine **Man**: mannose **Fuc**: fucose

**Asn**: asparagine **OS**: oligosaccharide

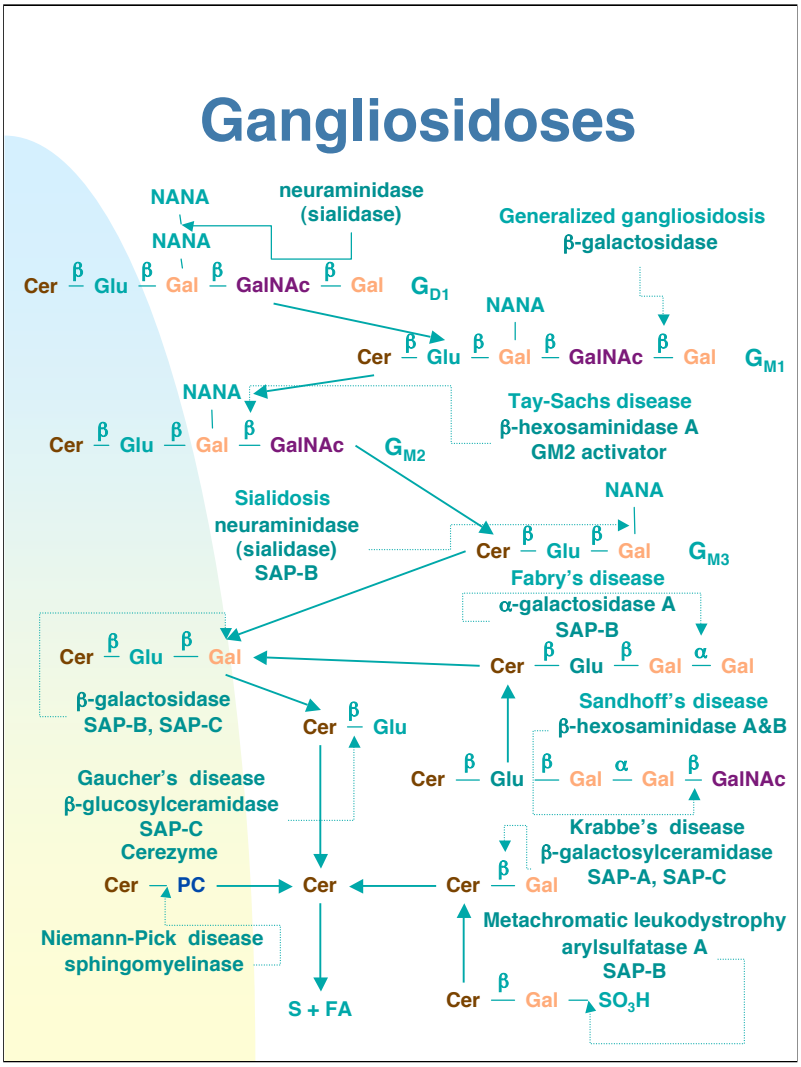



**IduUA**: iduronic acid **GalNAc**: *N*-acetylgalactosamine

**GlcUA**: glucuronic acid **GlcNAc**: *N*-acetylglucosamine **GlcN**: glucosamine

**Gal**: galactose **DS**: dermatan sulfate **HS**: heparan sulfate

**KS**: keratan sulfate



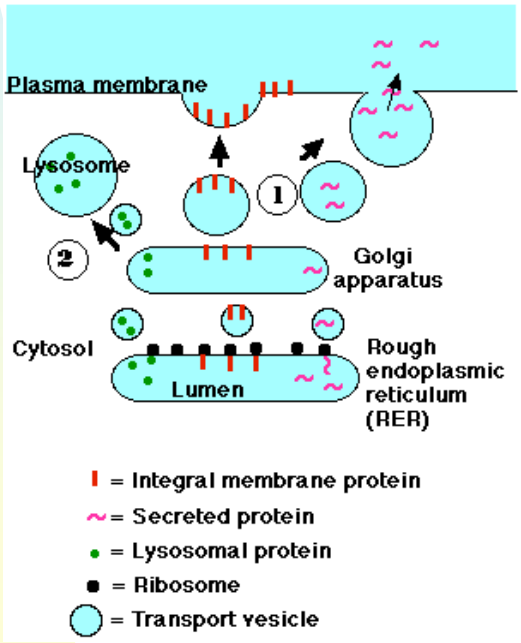

**NANA**: *N*-acetylneuraminic acid (sialic acid) **Cer**: ceramide
**Glu**: glucose **Gal**: galactose **GalNAc**: *N*-acetylgalactosamine
**G**: ganglioside **D1**: dineuraminic acid + Gal-GalNAc-Gal-Glc-Cer
**M1**: neuraminic acid + Gal-GalNAc-Gal-Glc-Cer
**M2**: neuraminic acid + GalNAc-Gal-Glc-Cer **M3**: neuraminic acid + Gal-Glc-Cer
**SAP**: sphingolipid activator protein **Cer-Glu-Gal**: lactosylceramide
**Cer-Glu**: glucosylceramide **S**: sphingosine **FA**: fatty acid
**Cer-Glu-Gal-Gal-GalNAc**: globoside **Cer-Glu-Gal-Gal**: globotriaosylceramide
**PC**: phosphocholine **Cer-PC**: sphingomyelin
**Cer-Gal-$SO_3H$**: sulfatide **Cer-Gal**: galactosylceramide

# Targeting of Lysosomal Enzymes to Lysosomes

**Addition of M6P to lysosomal enzymes**

**Recognition by MPRs**

**M6P independent pathways**




**M6P**: mannose-6-phosphate

**MPR**: mannose-6-phosphate receptor