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## Oligosaccharides, oligosaccharyl phosphates and glycosylation disorders

**Stuart E. H. Moore**

PhD, INSERM U1149, Paris, France.

Université Denis Diderot, Paris 7, Paris, France

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Protein *N*-glycosylation requires the biosynthesis of a dolichol-linked oligosaccharide (DLO) carrier. Mutations in genes required for the biosynthesis of DLO or the transfer of its oligosaccharide moiety onto protein in the endoplasmic reticulum cause rare inherited diseases such as congenital disorders of glycosylation (CDG). For many years, it has been known that protein *N*-glycosylation is accompanied by the hydrolysis of oligosaccharides and oligosaccharyl phosphates from DLO. The physiological reasons for these cleavage reactions remains mysterious. However, more recent, careful study of the biochemical deficits in cells from patients with glycosylation disorders is throwing light on the functions of these DLO regulatory mechanisms.

