

BIOCHEMISTRY SEMINAR



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"Functional roles of glycosylated RNAs"

Abstract: Glycans traditionally modify lipids and proteins to mediate inter- and intramolecular interactions across all domains of life, while RNA has not been thought to be a major target of glycosylation. I will discuss evidence for the discovery of glycoRNAs in mammalian cells which would represent a third scaffold for glycosylation. By interacting with immunomodulatory receptors, glycoRNAs also provide a new mechanistic to consider how cells express signals via glycans on the cell surface. Highlights of the chemical biology used to uncover glycoRNAs will be presented, with a focus on our more recent work aiming to define the precise linkage between N-glycans and RNA as well as the organization basis for glycoRNA presentation on the cell surface. A more generalized view for the role of cell surface RNA biology will be discussed.