



## Glycosaminoglycan–Protein Interactions: The First Draft of the Glycosaminoglycan Interactome

### Description

The six mammalian glycosaminoglycans (GAGs), chondroitin sulfate, dermatan sulfate, heparin, heparan sulfate, hyaluronan, and keratan sulfate, are linear polysaccharides. Except for hyaluronan, they are sulfated to various extent, and covalently attached to proteins to form proteoglycans. GAGs interact with growth factors, morphogens, chemokines, extracellular matrix proteins and their bioactive fragments, receptors, lipoproteins, and pathogens. These interactions mediate their functions, from embryonic development to extracellular matrix assembly and regulation of cell signalling in various physiological and pathological contexts such as angiogenesis, cancer, neurodegenerative diseases,



the abundance of GAGs in tissues to build tissue-specific interactomes, and GAG interactions with metal ions such as calcium, which plays a major role in the assembly of the extracellular matrix and its interactions with cells. Such a contextualized interactome will be useful to identify druggable GAG–protein interactions for therapeutic purpose

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1. News