

11. Relating Sugar Chains' Structures and Localization with their Biological Functions

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Structures of sugar chains are modified during and after biosynthesis in connection with their intra and extra cellular locations. Some sugar chains are enriched in particular domains of cellular membranes. Dynamics of sugar chains, including structural changes, localization and mode of distribution, are closely related to their biological functions. In this research program, we will clarify relationships between dynamics and biological functions of sugar chains. We also plan to translate results from these research into practical methods to regulate biological functions of sugar chains.