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ABSTRACT BOOK

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TAILORED PROTEIN MODIFICATION: MODULATING GLYCAN-LECTIN INTERACTIONS AND BEYOND

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Protein modification by means of chemical or chemoenzymatic methods offers a highly valuable tool to modulate protein functionality and efficacy and results extremely convenient for therapeutic applications.[1] However, achieving controlled protein functionalization poses considerably challenges, primarily revolving around issues related to efficiency, selectivity, and the need for detailed characterization of the resulting generated biomolecules. Here, we present innovative methodologies for site-selective post-synthetic protein modification that enable modulating glycan-lectin interactions or leverage the physicochemical properties of glycans.[2] In combination, comprehensive NMR-based strategies[3] to unambiguously characterize the novel features introduced in the protein and to assess the new molecular recognition processes have been developed. The proof-of-concept has been demonstrated using human galectin-3 as model lectin.

References

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