

## NEW NMR STRATEGIES TO INVESTIGATE GLYCAN-LECTIN INTERACTIONS OF COMPLEX GLYCOCONJUGATES

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The molecular recognition of glycans is at the heart of numerous biological processes within living organisms and plays crucial roles in health and disease. Understanding these interactions at the molecular/atomic level is of paramount importance for developing novel therapeutic approaches, improving disease diagnostics and/or advancing in biotechnological applications [1].

Given the dynamic nature of glycans, NMR has been extensively used to study glycan-lectin interactions and remains at the forefront of existing approaches [2]. In this context, <sup>19</sup>F-labelled glycan probes have been exploited in diverse applications [3] and fluorine NMR has emerged as a powerful strategy to interrogate biological systems in complex environments closely resembling native conditions [4].

Herein, we describe the NMR analysis of the molecular recognition of complex glycoconjugates, even in complex environments such as the cell, by the exploitation of <sup>19</sup>F-NMR spectroscopy. This novel approach allowed easily detecting complex glycans, monitoring binding events and/or profiling the glycosylation of intact cells.

### References:

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