

Synthesis of fluorinated oligomannosides for DC-SIGN recognition

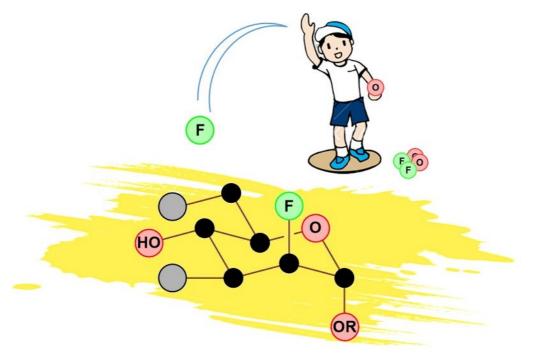
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Addressing fluorinated carbohydrates has become a priority in glycoscience.[1] Fluorination provides enhanced features, as increased lypophilicity, metabolic resistance, or favourable NMR properties, leading to applications involving PET, MRI, or the development of glycomimetics.[2] Therefore, novel, straightforward and high-yielding strategies are crucial to access more complex fluorinated carbohydrates, and further exploit their beneficial properties.

Herein, based on our previous experience with the synthesis of complex oligomannosides (both linear and branched), including Man₉[3,4], the natural epitope of DC-SIGN receptor, we report the synthesis of ¹⁹F-labelled oligomannosides in different positions based on Man₉ architecture to gain more insights at molecular level of the binding of these compounds to DC-SIGN.



General representation of the fluorine-containing oligomannosides.

Bibliographic references:

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Glycosylation and oligosaccharide synthesis