

Glyconanoparticles for applications in nanomedicine

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Advances in synthetic chemistry have made possible a reproducible synthesis of numerous nanomaterials with properties that can be exploited for healthcare applications. However, after exposure to biological fluid, such as cell culture media or blood plasma, their surface firmly interacts with the nanoparticle's surface changing the physico-chemical properties and covering possible active targeting molecules.

Glycans are naturally occurring biomolecules that affect several biological pathways, including the modulation of the immunological system, and have exploitable properties that make them unique candidates to implement in the field of nanotechnology. In this study, we developed a series of glyco-nanoconjugates and we evaluated the effect of the glycans on the protein corona formation and their accessibility to target receptors in a protein-rich environment.