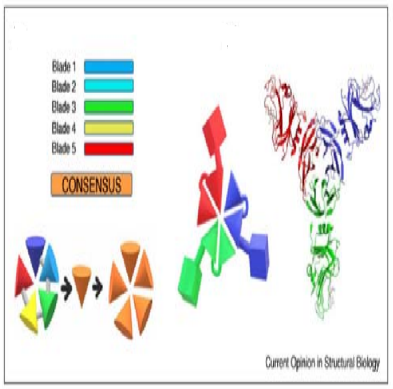
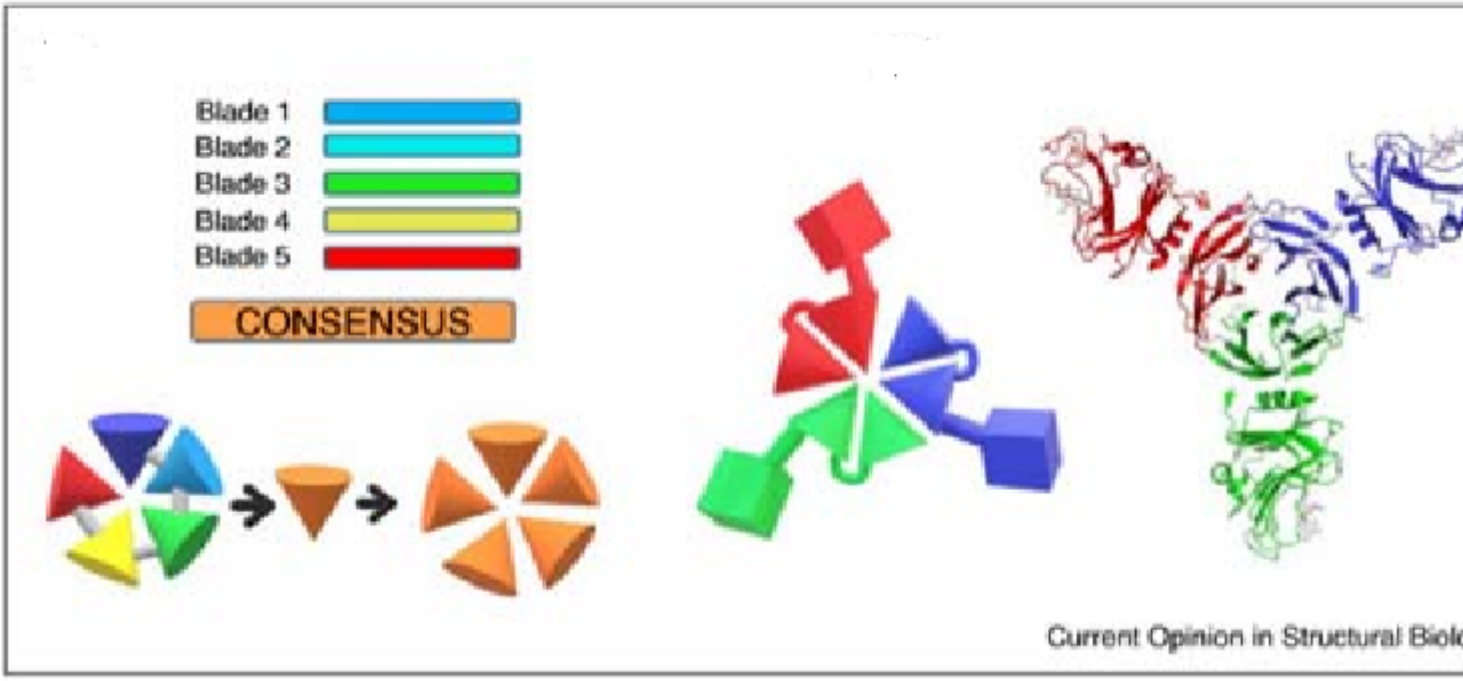


Structure and Engineering of Tandem Repeat Lectins

Description

Through their ability to bind complex glycoconjugates, lectins have unique specificity and potential for biomedical and biotechnological applications. In particular, lectins with short repeated peptides forming carbohydrate-binding domains are not only of high interest for understanding protein evolution but can also be used as a scaffold for engineering novel receptors.



Synthetic glycobiology now provides the tools for engineering the specificity of lectins as well as their structure, multivalency and topologies. This review focuses on the structure and diversity of two families of tandem-repeat lectins, that is, Î²-trefoils and Î²-propellers, demonstrated as the most promising scaffold for engineering novel lectins.

Category

1. News