

INVESTIGATION OF THE REVERSIBILITY AND THE POLYVALENCE OF CARBOHYDRATE-PROTEIN INTERACTION ON CARBOHYDRATE ARRAYS

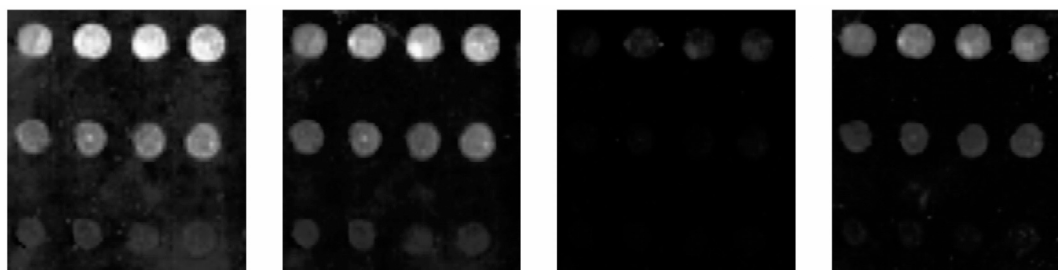
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The complex interaction of carbohydrate-epitopes located on cell-surfaces with various binding partners such as carbohydrates, proteins, viruses and bacteria is of great importance in molecular recognition.[1, 2] Carbohydrate microarrays have been developed during the last years as novel analytical tool in order to allow rapid and parallel investigations of these interactions. Diverse methods for the immobilization of carbohydrate-epitopes to a solid support have been applied. [3-8]

Our approach uses reductive amination or amide bond formation for the covalent coupling of carbohydrates to commercially available amino-functionalized glass slides.[9] Kinetic studies of the coupling reaction were performed using fluorescence labeled carbohydrates. The reversibility of the lectin binding to the immobilized carbohydrate structures was investigated using different eluting or denaturing agents followed by rehybridization experiments. Currently we study the immobilization of different branched carbohydrate-structures to validate the polyvalent character of the array. Our recent results will be presented.

OP
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Hybridization

Elution for 1h

Elution for 24 h

Rehybridization

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