

Supporting Information for:

Gold Nanoparticle-Linked Analysis of Carbohydrate-
Protein Interactions, and Inhibitors, using Unlabelled
Proteins in Multiwell Plates and Measurement Using a
Simple Digital Camera.

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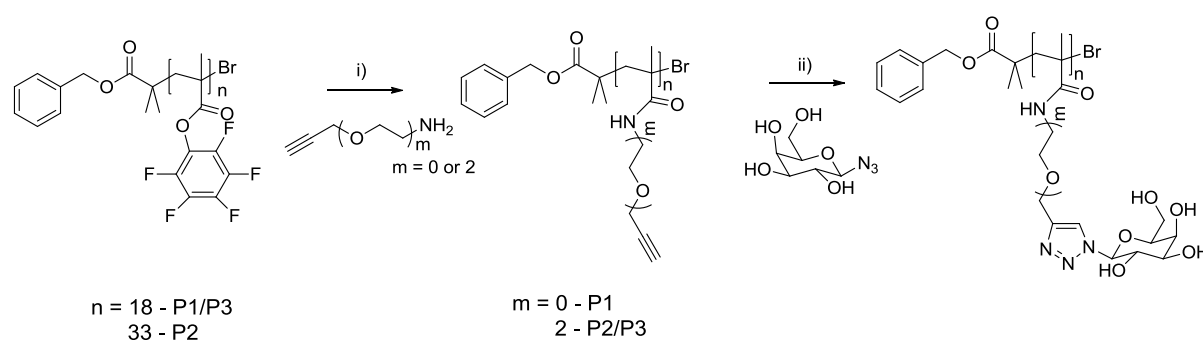
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Experimental Section

Glycopolymer Synthesis and Characterisation. The glycopolymers used in this study have been previously reported in a publication.⁽¹⁾ They were obtained by tandem post-polymerization modification and summarized below for completeness. The reaction scheme used is shown in Scheme S1 and the characterization of the polymers in the subsequent tables. For full details please see the indicated reference.



Scheme S1. Synthesis of galactose-functional polymers with varying linker length y tandem post-polymerization modification.

Table S1. Molecular characteristics of glycopolymers used in this study

Polymer	DP ^[a]	Linker ^[b]	M_n ^[c] ($\text{g}\cdot\text{mol}^{-1}$)	M_w/M_n ^[c]
P1	18	Short $m = 0$	5100	1.29
P2	33	Long $m = 2$	10000	1.28
P3	18	Long $m = 2$	7250	1.32

[a] Theoretical number average degree of polymerization; [b] Alkyne used to modify PPFMA scaffold; [c] determined by SEC in DMF.

Additional Results

Gold Nanoparticle-Linked Measurement of ConA –Mannam Interactions. Concanavalin

A binding to mannam-coated microwell plates was evaluated as described in the main paper and the data summarized below.

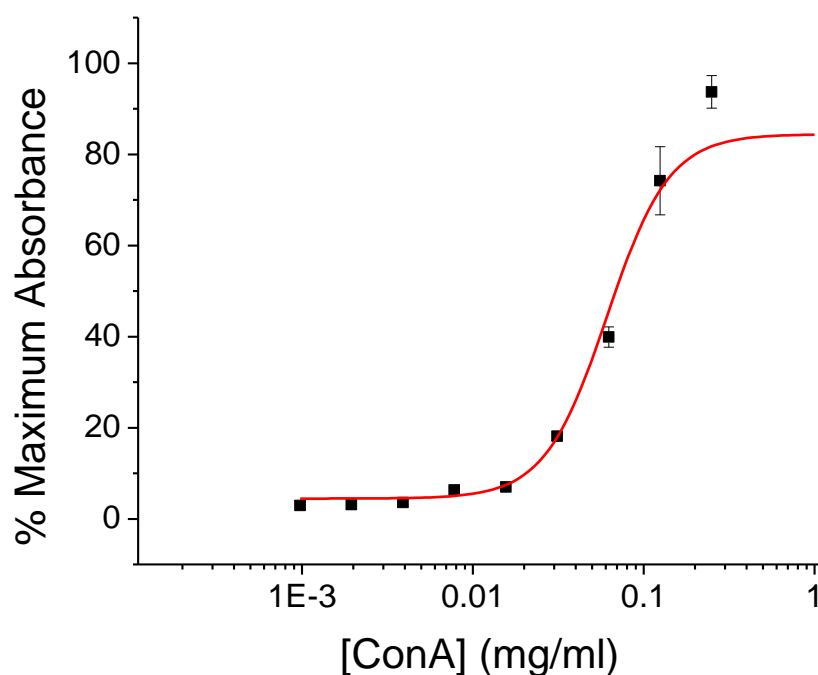


Figure S1. Dose dependant binding curves of ConA onto mannam functional surfaces. AuNP absorbance at λ_{max} . Errors bars represent \pm standard deviation from a minimum of 3 repeats.

Reference

- (1) Richards, S.-J., Jones, M. W., Hunaban, M., Haddleton, D. M., and Gibson, M. I. (2012) Probing Bacterial-Toxin Inhibition with Synthetic Glycopolymers Prepared by Tandem Post-Polymerization Modification: Role of Linker Length and Carbohydrate Density. *Angew. Chem. Int. Ed.* 51, 7812 - 7816.