## Selective Enrichment of Sialylated Glycopeptides by Using a

## D-allose@SiO<sub>2</sub> matrix

Na Sun<sup>*a*</sup>, Yuting Xiong<sup>*b*</sup>, Guangyan Qing<sup>*b*</sup>, Yanyan Zhao<sup>*a*\*</sup>, Xiuling Li<sup>*b*\*</sup>,

## Xinmiao Liang<sup>b</sup>

<sup>*a*</sup> Pharmacy College, Dalian Medical University, No. 9 western south Lvshun road, Dalian, 116044, P.R. China

<sup>b</sup> Key Laboratory of Separation Science for Analytical Chemistry, Dalian Institute of Chemical

Physics, Chinese Academy of Sciences, 457 Zhongshan Road, Dalian 116023, P. R. China

Corresponding author Email: zhaoyanyan917@163.com; lixiuling@dicp.ac.cn

Table S1 Determination of three recovery rates of ABS material and their average value

Table S2 Enrichment conditions for glycopeptides with ABS material

Table S3 List of identified glycopeptides and glycosylation sites from digests of HeLa S3 cell

lysate captured by ABS material (the data was presented in the other supporting information

material attached with the manuscript)

Fig. S1 Mass spectra of glycopeptides enriched from tryptic digests of fetuin/BSA (1:500, w:w) with ABS matrix

Fig. S2 Glycopeptides enriched from the digest of fetuin by using ABS matrix (3 parallel experiments). Glycopeptides were marked with asterisks

Fig. S3 Determination of the adsorption capacities of fetuin tryptic digests on the ABS material Table S1 Determination of three recovery rates of ABS material and their average value

Time	Recovery	
1	74%	
2	78%	
3	83%	
Average	78.3% ±5.7%	



Fig. S1 Mass spectra of glycopeptides enriched from tryptic digests of fetuin/BSA (1:500, w:w) with ABS matrix



Fig. S2 Glycopeptides enriched from the digest of fetuin by using ABS matrix (3 parallel experiments). Glycopeptides were marked with asterisks



Fig. S3 Determination of the enrichment capacities of fetuin tryptic digests on the ABS material

Table S2 Enrichment conditions for glycopeptides with ABS material

Materials	Sample loading	Rinse	Elution
		CH <sub>3</sub> CN / H <sub>2</sub> O / FA	
D-allose@SiO2	CH <sub>3</sub> CN / H <sub>2</sub> O / FA	75:24:1 (v/v) 100 μL×2	CH <sub>3</sub> CN / H <sub>2</sub> O / FA
(ABS)	80:19:1 (v/v)	CH <sub>3</sub> CN / H <sub>2</sub> O / FA	20:79:1 (v/v) 40 µL
		70:29:1 (v/v) 100 µL×4	