

# Efficient chemoenzymatic synthesis of biotinylated human serum albumin-sialoglycoside conjugates containing *O*-acetylated sialic acids

Hai Yu,<sup>a</sup> Harshal A. Chokhawala,<sup>a</sup> Ajit Varki<sup>b</sup> and Xi Chen<sup>a\*</sup>

<sup>a</sup>*Department of Chemistry, University of California-Davis, One Shields Avenue, Davis, CA 95616, USA.*

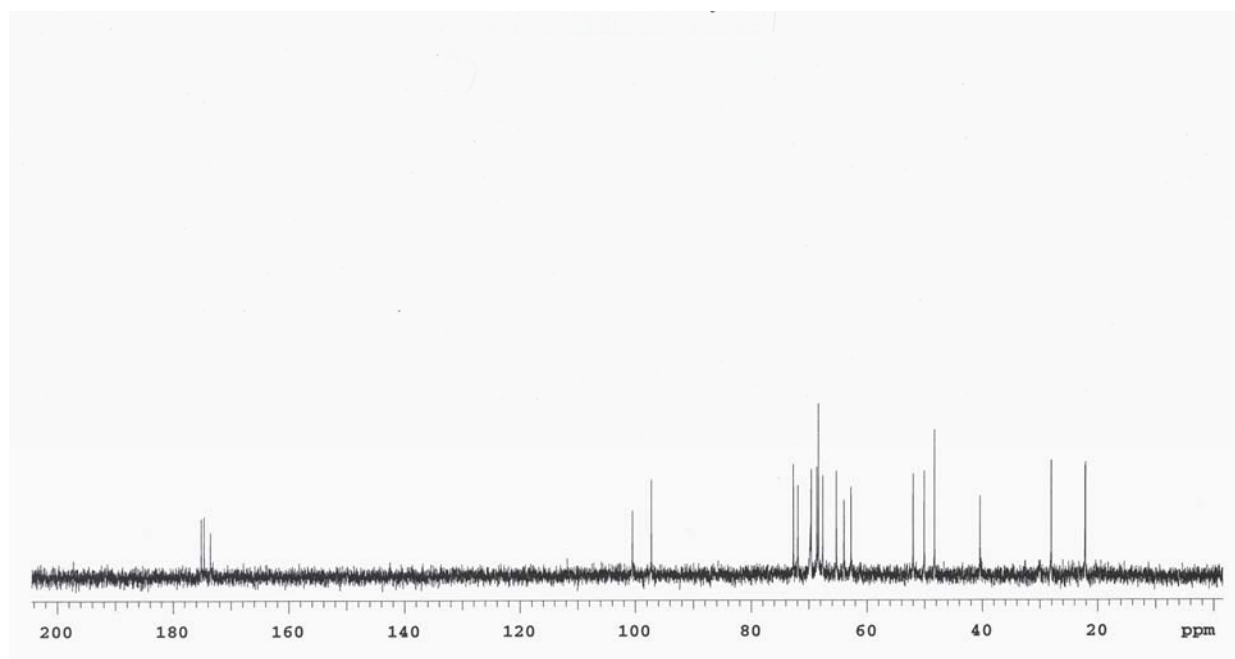
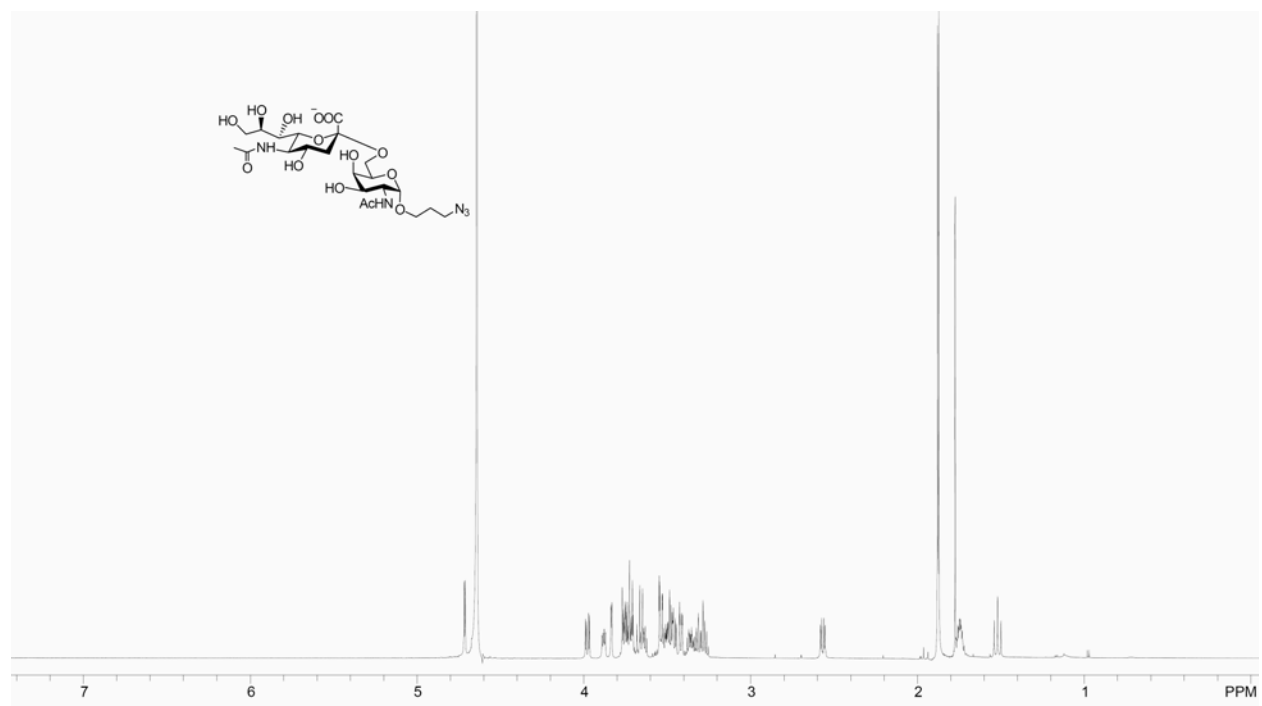
<sup>b</sup>*Departments of Medicine and Cellular & Molecular Medicine, University of California-San Diego, La Jolla, CA 92093, USA.*

## ELECTRONIC SUPPLEMENTARY INFORMATION

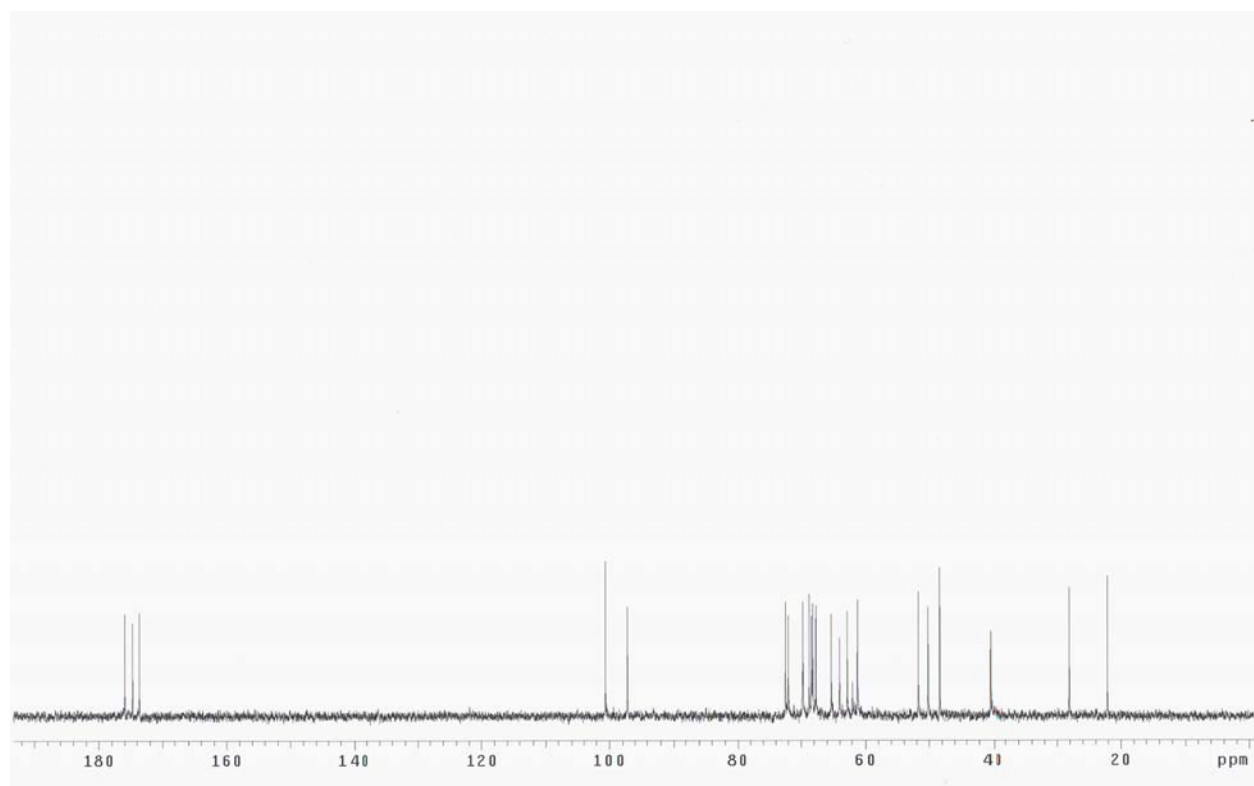
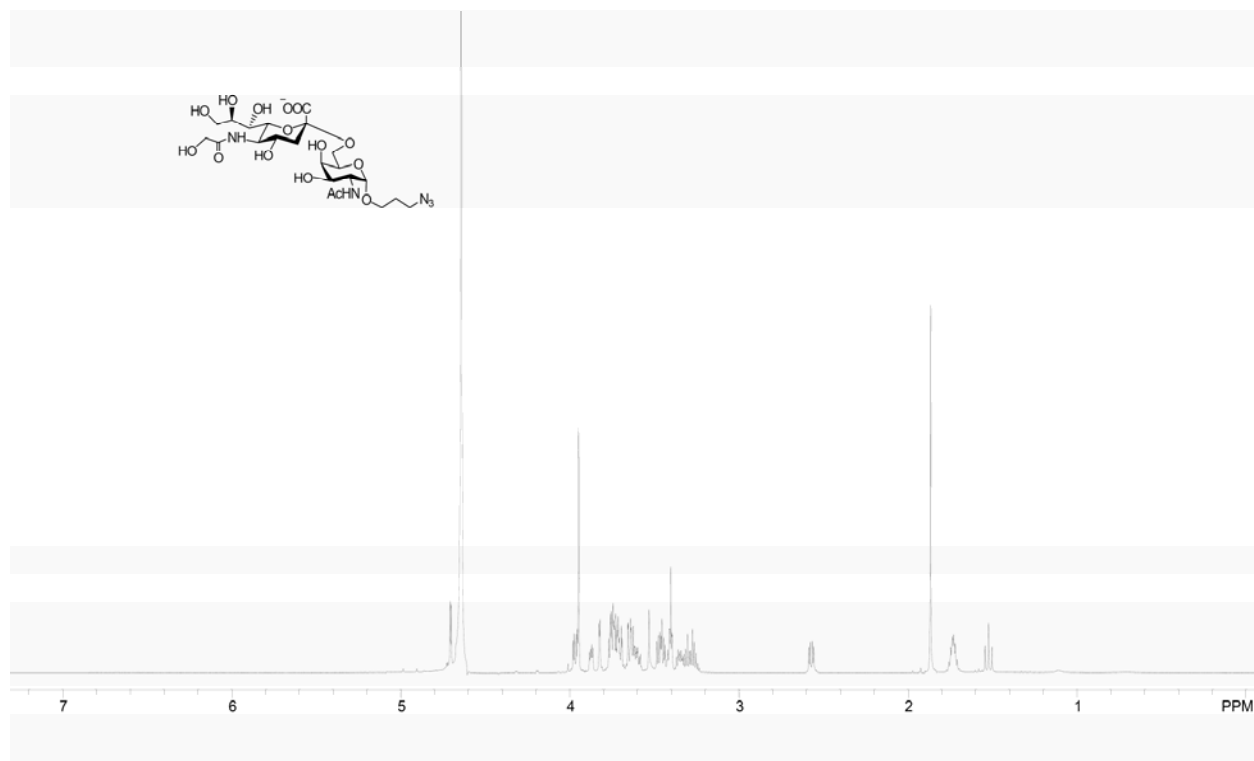
<sup>1</sup>H and <sup>13</sup>C NMR spectra for compounds **8-11**;

<sup>1</sup>H NMR spectra for compounds **12-15** and **25-28**.

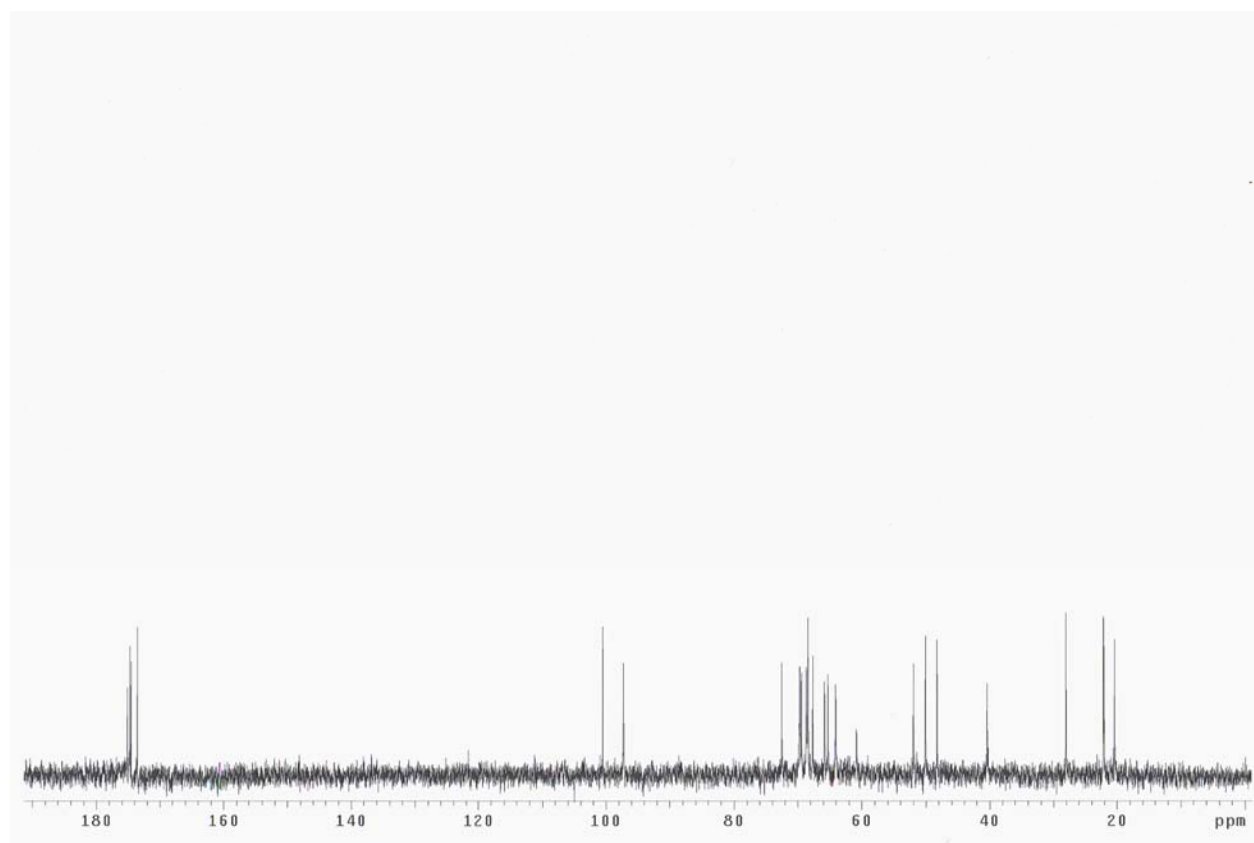
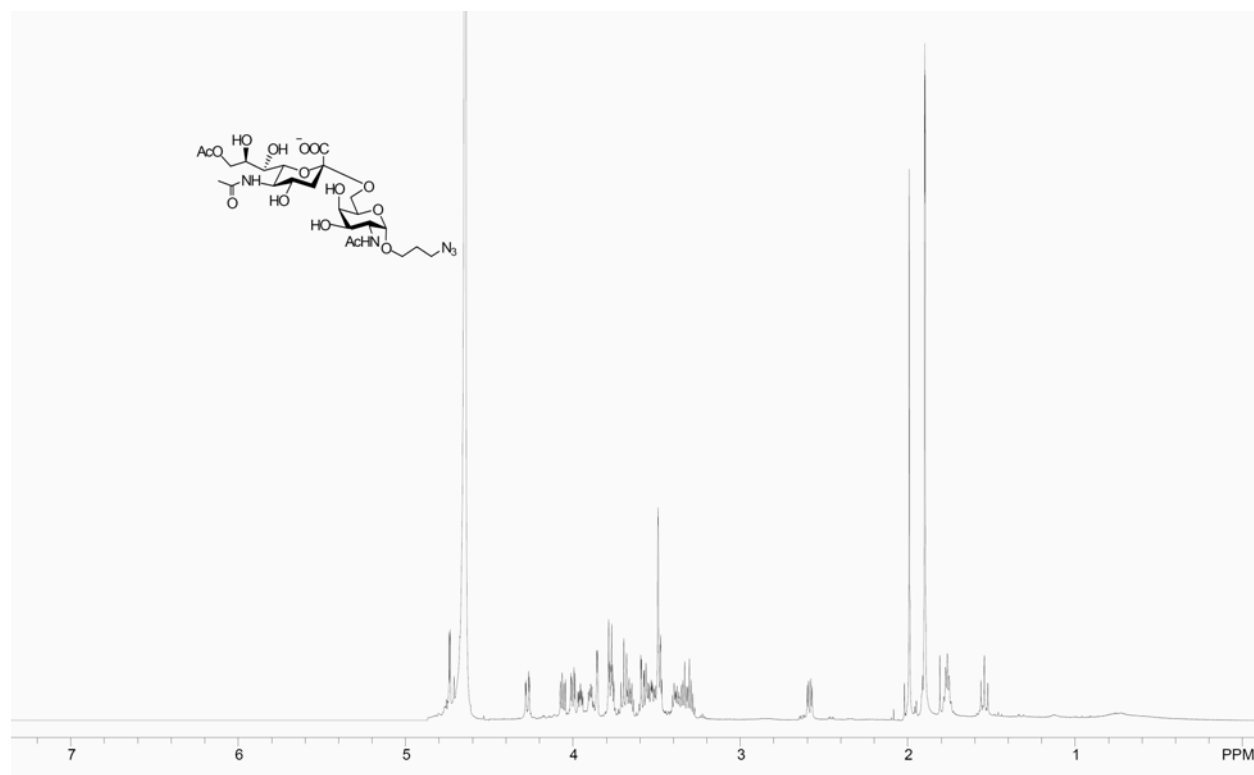
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of Neu5Ac $\alpha$ 2,6GalNAc $\alpha$ ProN $_3$  (8)



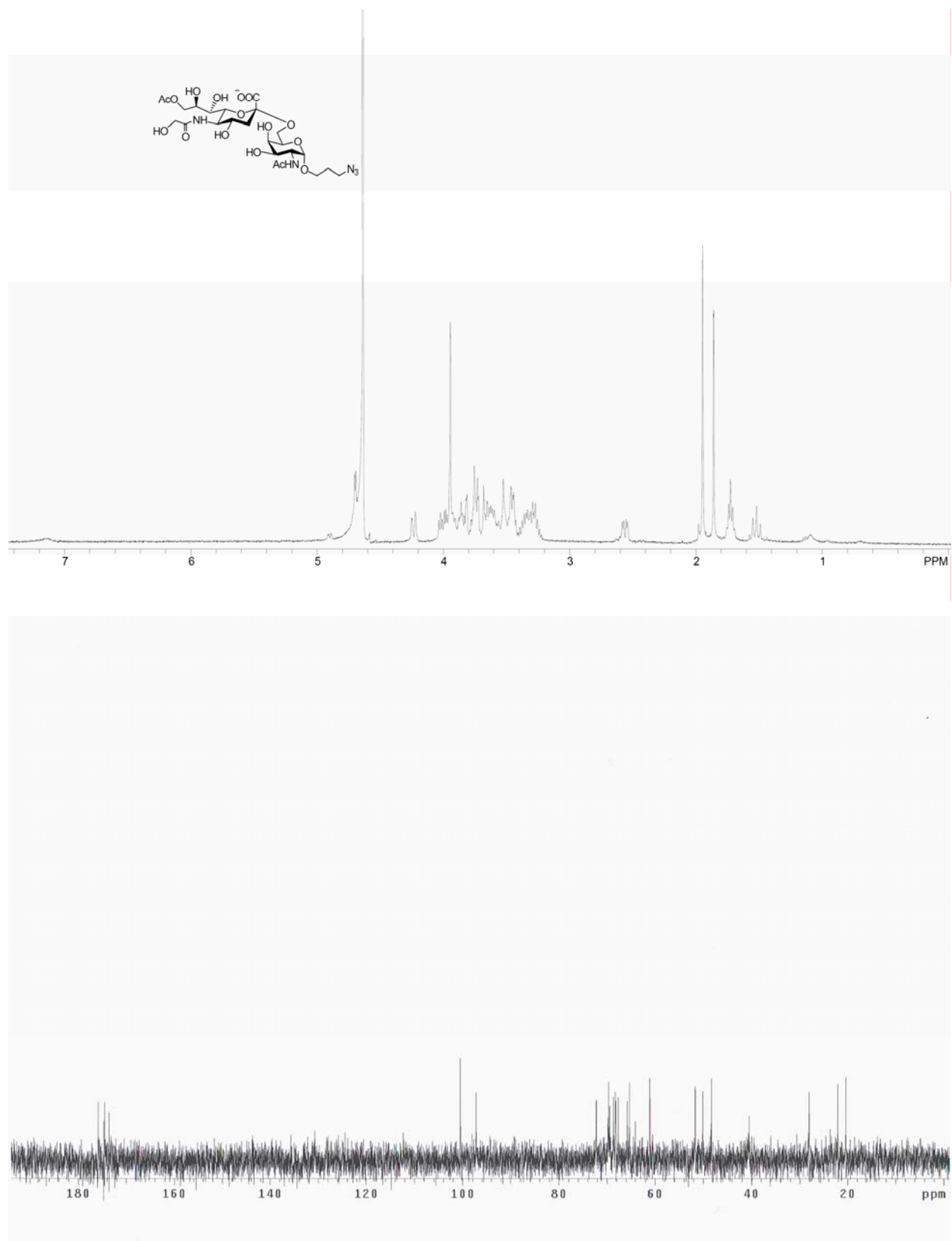
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of Neu5Gc $\alpha$ 2,6GalNAc $\alpha$ ProN $_3$  (9)



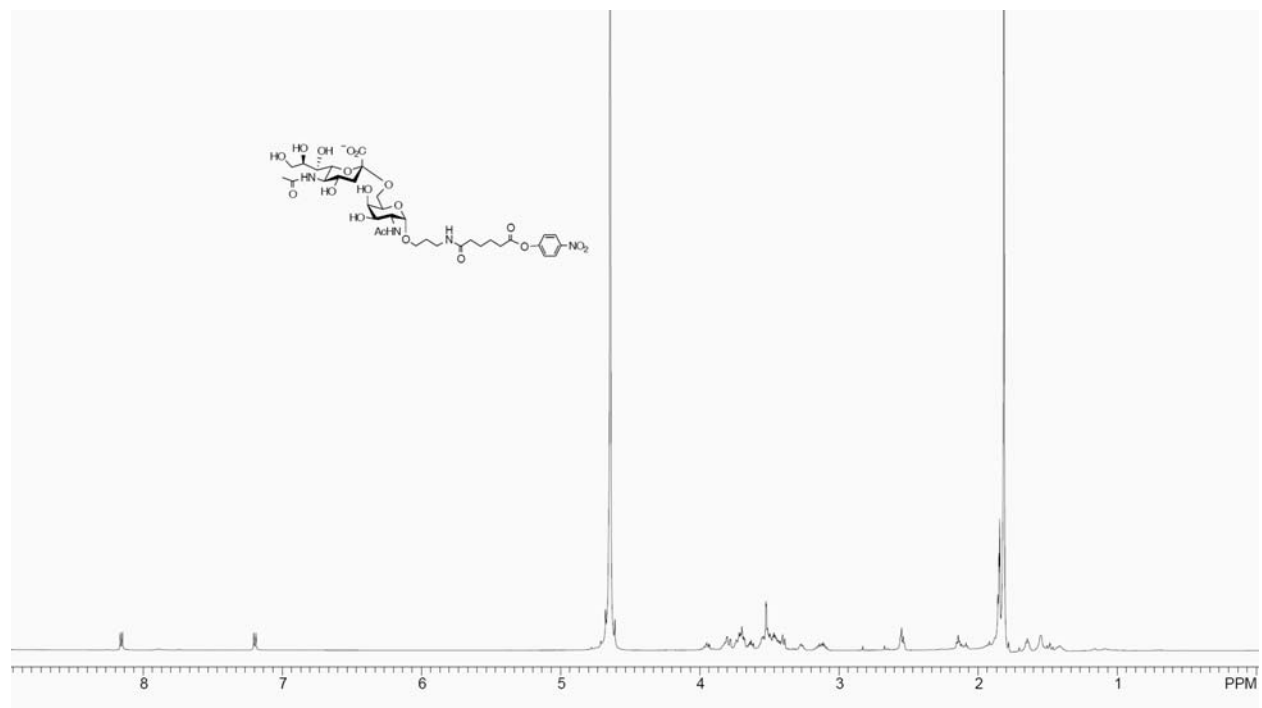
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of Neu5,9Ac $_2$  $\alpha$ 2,6GalNAc $\alpha$ ProN $_3$  (10)



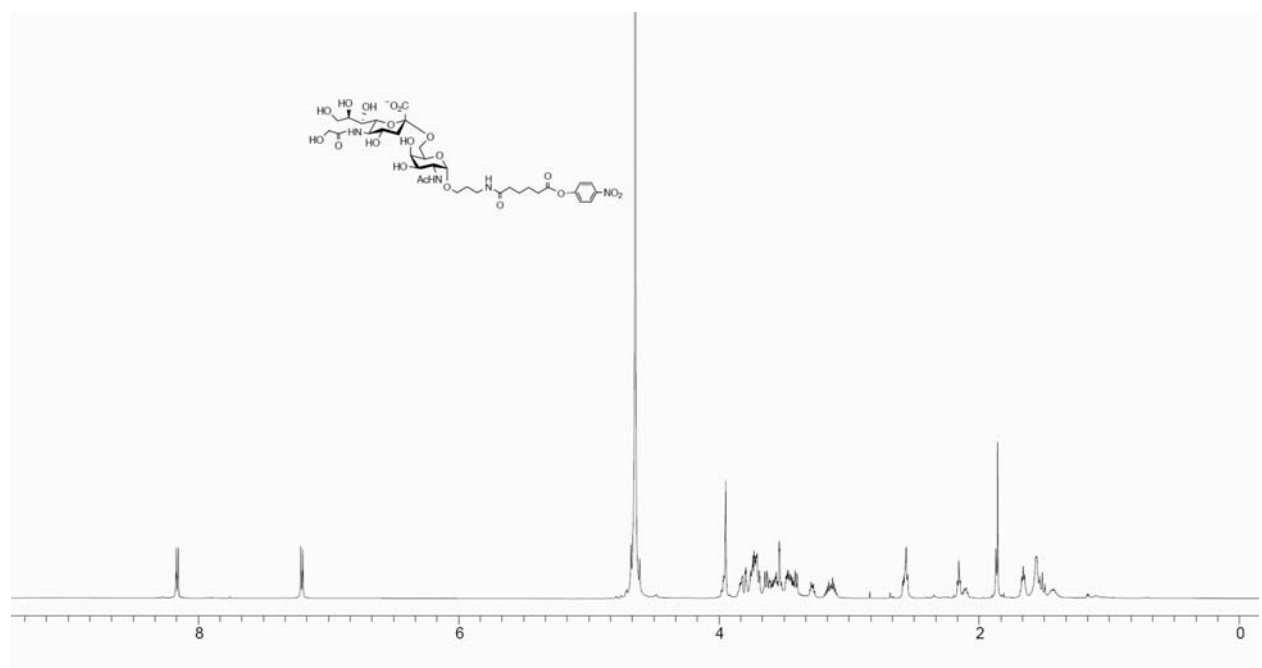
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of Neu9Ac5Gc $\alpha$ 2,6GalNAc $\alpha$ ProN $_3$  (11)



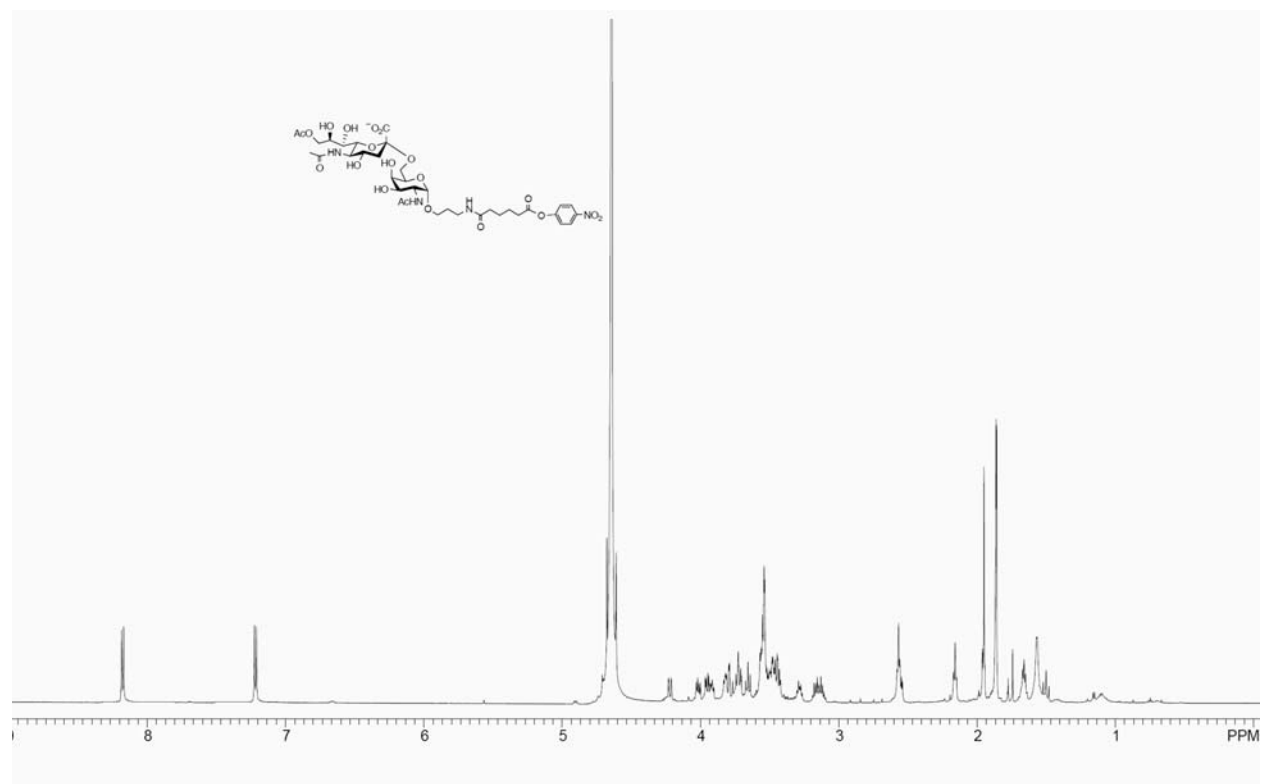
$^1\text{H}$  NMR spectrum of **12**



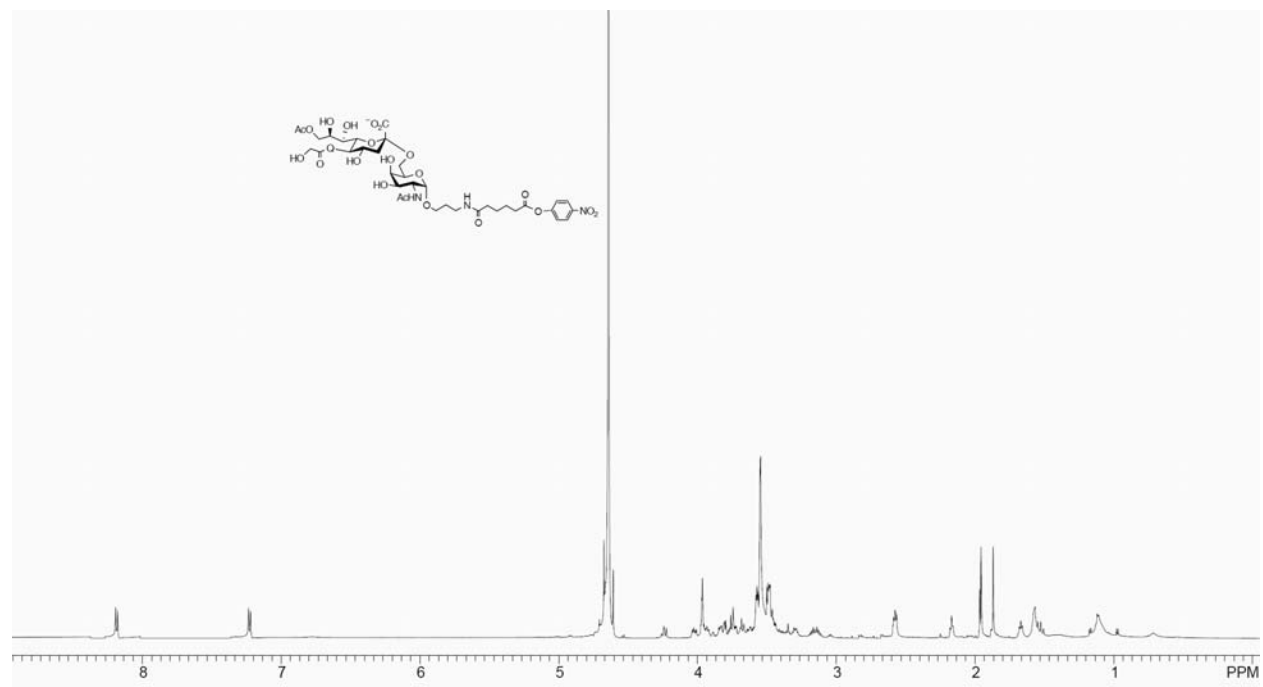
$^1\text{H}$  NMR spectrum of **13**



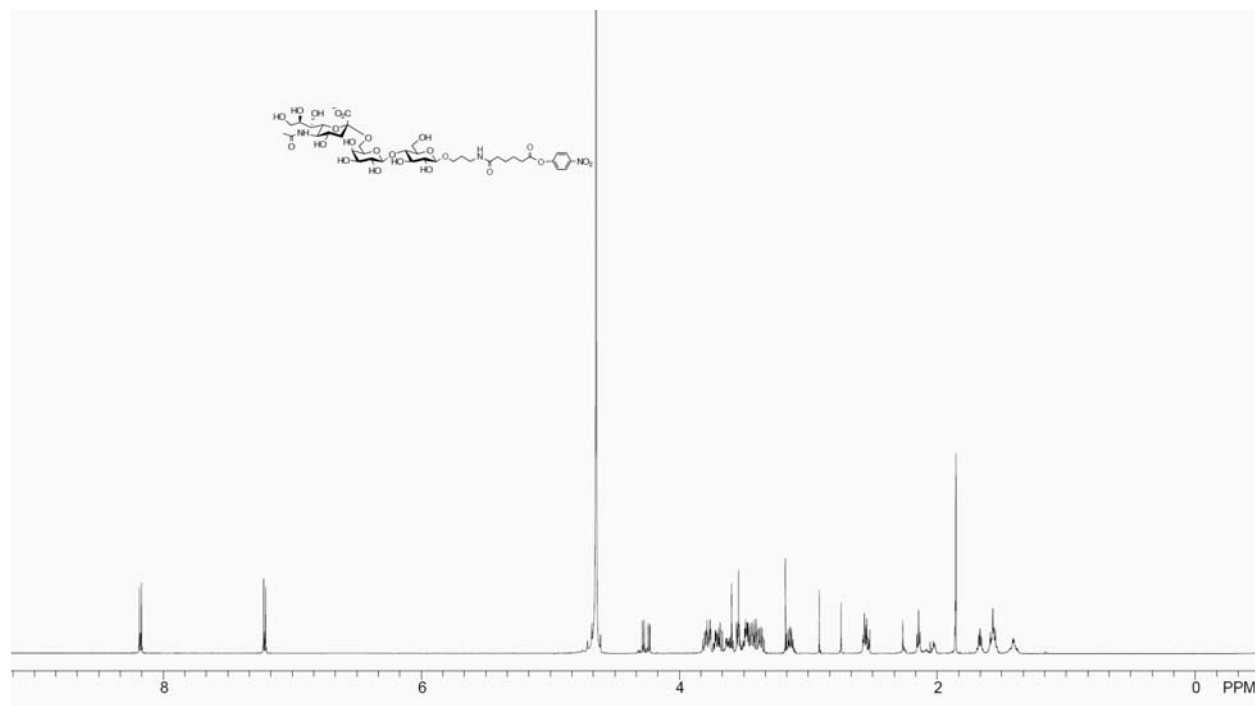
$^1\text{H}$  NMR spectrum of **14**



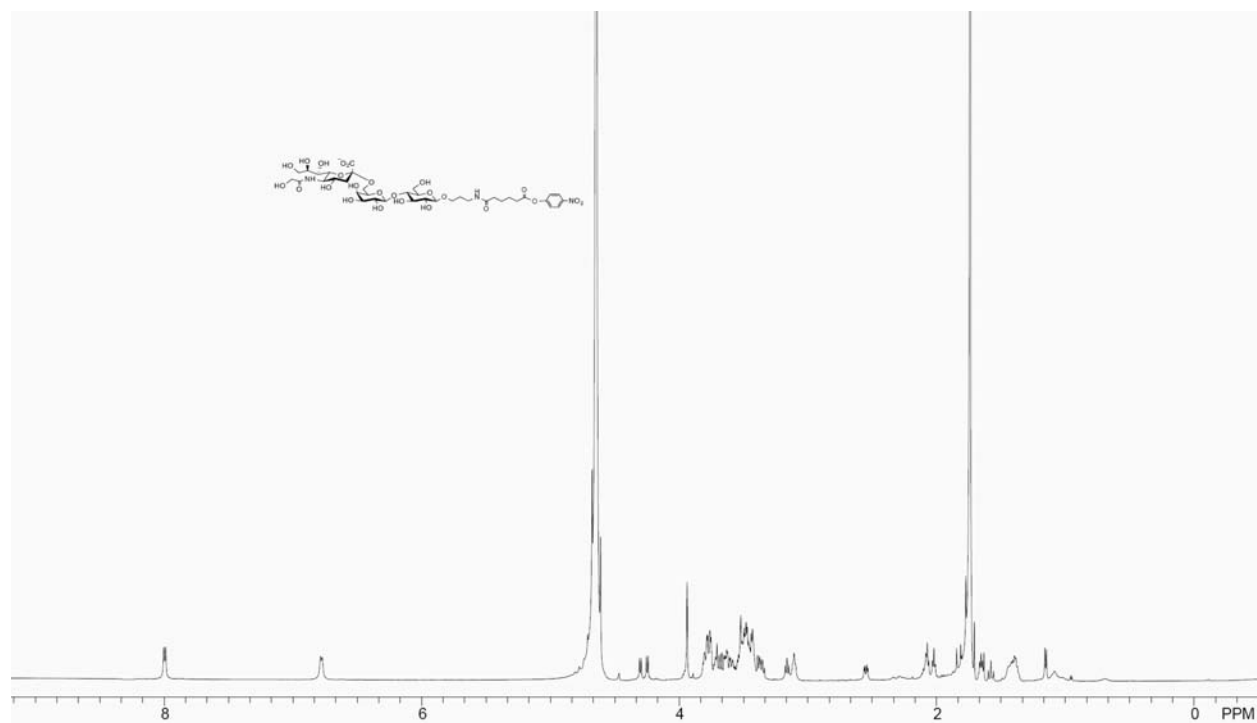
$^1\text{H}$  NMR spectrum of **15**



$^1\text{H}$  NMR spectrum of **25**

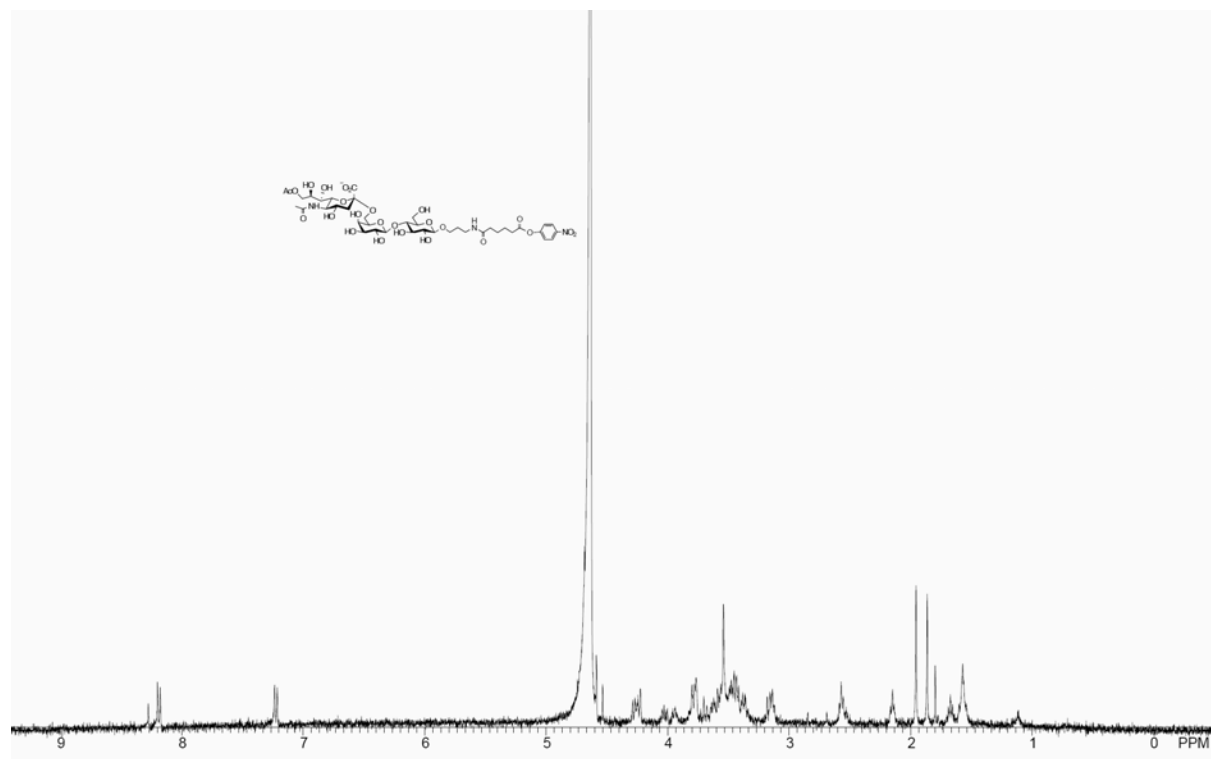


$^1\text{H}$  NMR spectrum of **26**





$^1\text{H}$  NMR spectrum of **27**



$^1\text{H}$  NMR spectrum of **28**

