

## Supplementary Information

# Synthesis & Evaluation of Novel Mannosylated Neoglycolipids for Liposomal Delivery System Applications

Leila Mousavifar <sup>1,†</sup>, Jordan D. Lewicky <sup>2,†</sup>, Alexis Taponard <sup>1</sup>, Rahul Bagul <sup>1</sup>, Madleen Rivat <sup>1</sup>, Shuay Abdullayev <sup>1</sup>, Alexandrine L. Martel <sup>2</sup>, Nya L. Fraleigh <sup>2</sup>, Arnaldo Nakamura <sup>3</sup>, Frédéric J. Veyrier <sup>3</sup>, Hoang-Thanh Le <sup>2,4,\*</sup> and René Roy <sup>1,\*</sup>

<sup>1</sup> Glycosciences and Nanomaterial Laboratory, Université du Québec à Montréal, P.O. Box 8888, Succ. Centre-Ville, Montréal, QC H3C 3P8, Canada

<sup>2</sup> Health Sciences North Research Institute, 56 Walford Road, Sudbury, ON P3E 2H2, Canada

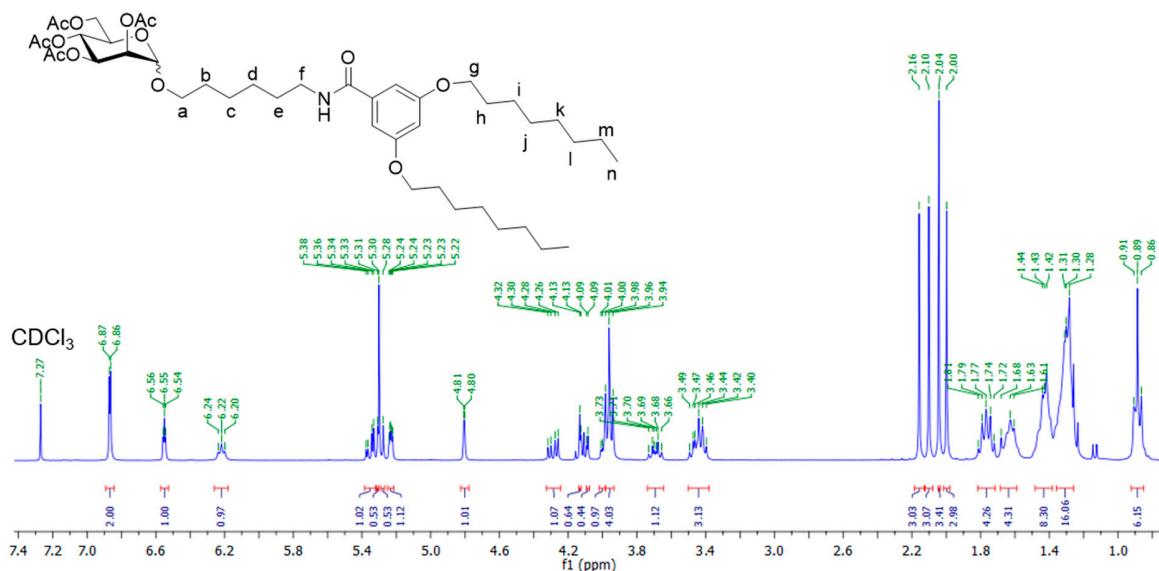
<sup>3</sup> Armand-Frappier Santé Biotechnologie Research Centre, Institut National de la Recherche Scientifique, 531 Boulevard des Prairies, Laval, QC H7V 1B7, Canada

<sup>4</sup> Medicinal Sciences Division, NOSM University, 935 Ramsey Lake Road, Sudbury, ON P3E 2C6, Canada

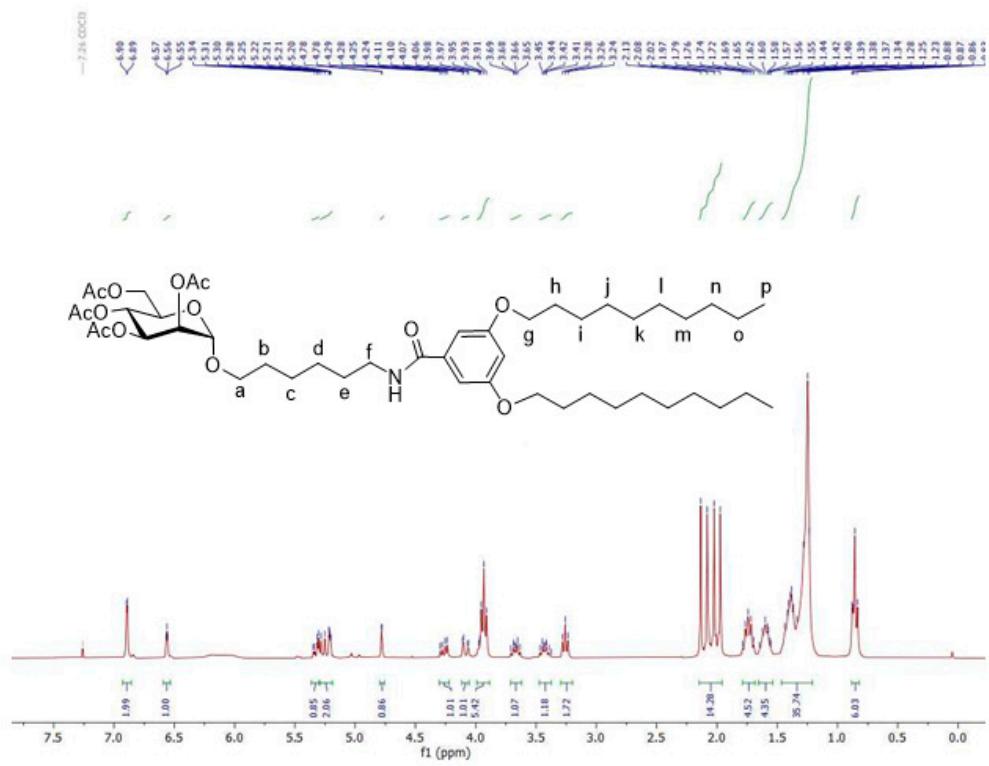
\* Correspondence: hle@hsnsudbury.ca or [hle@hsnri.ca](mailto:hle@hsnri.ca) (H.-T.L.); roy.rene@uqam.ca (R.R.)

† These authors contributed equally to this work.

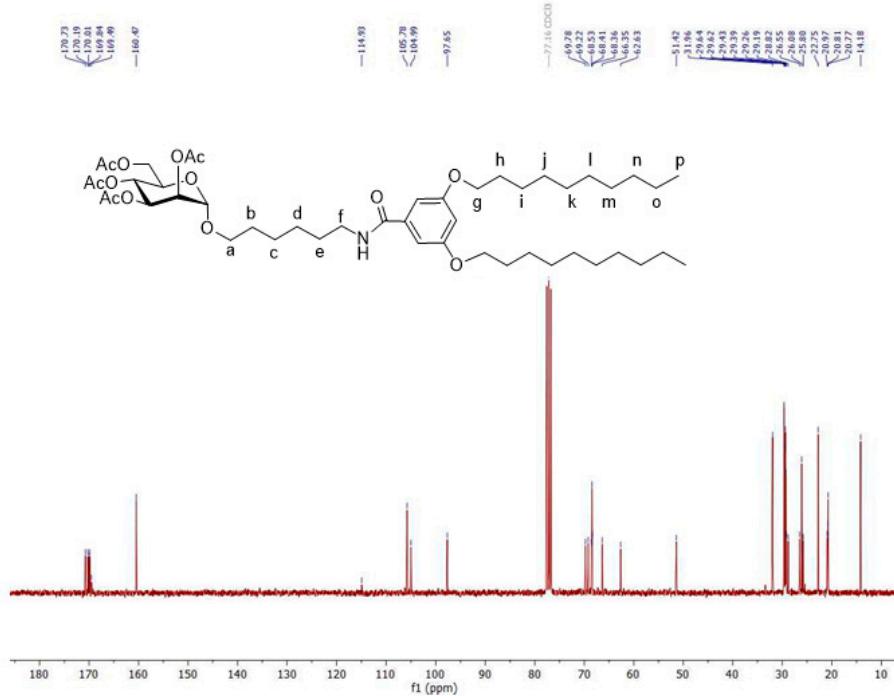
## NMR Spectra:



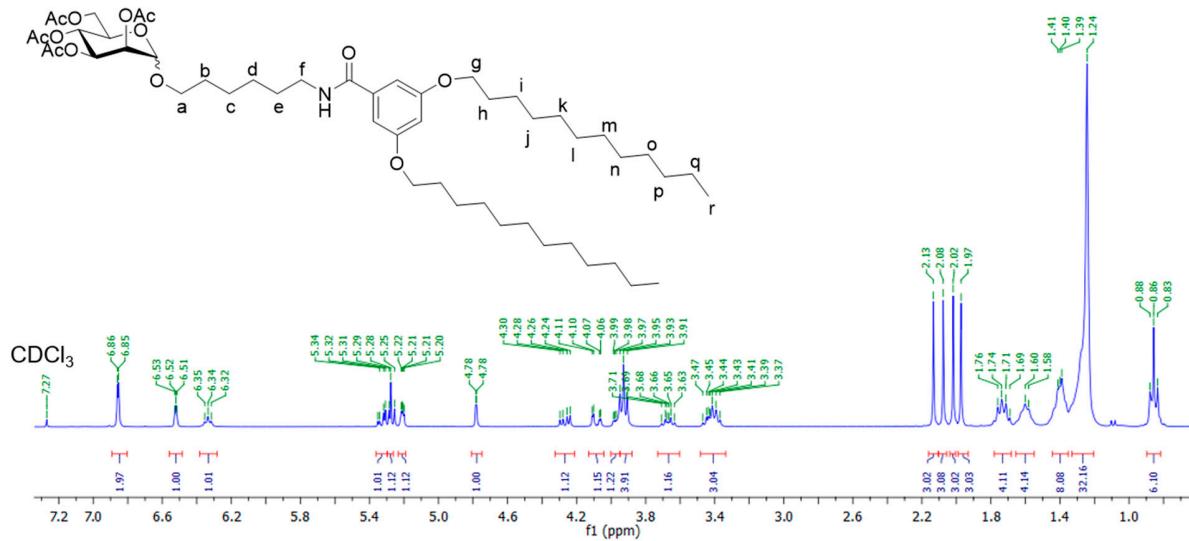
**Figure S1.** <sup>1</sup>H-NMR (300 MHz, CDCl<sub>3</sub>) of compound 16.



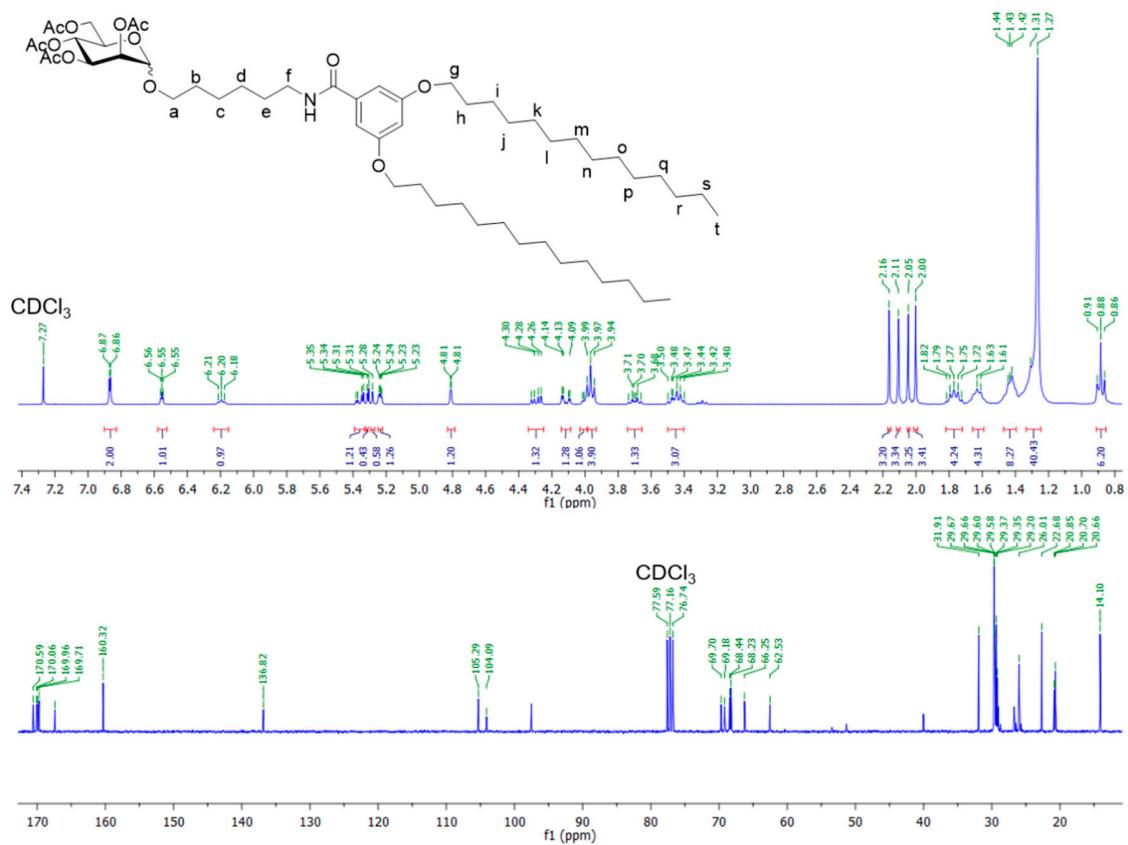
**Figure S2.**  $^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ ) of compound **17**.



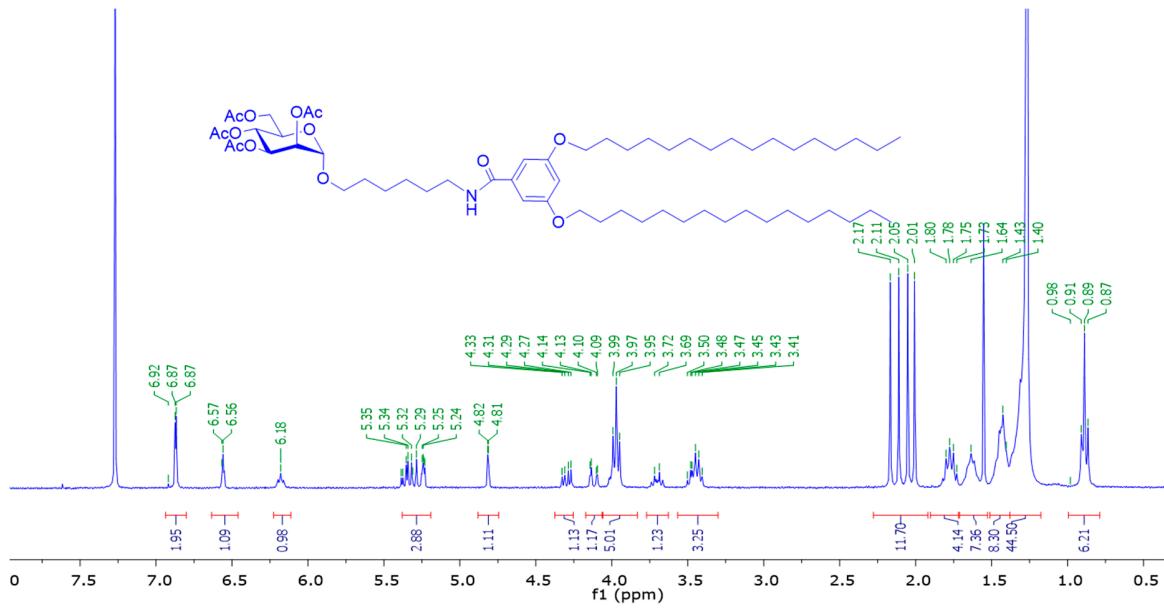
**Figure S3.**  $^{13}\text{C}$ -NMR (75 MHz,  $\text{CDCl}_3$ ) of compound **17**.



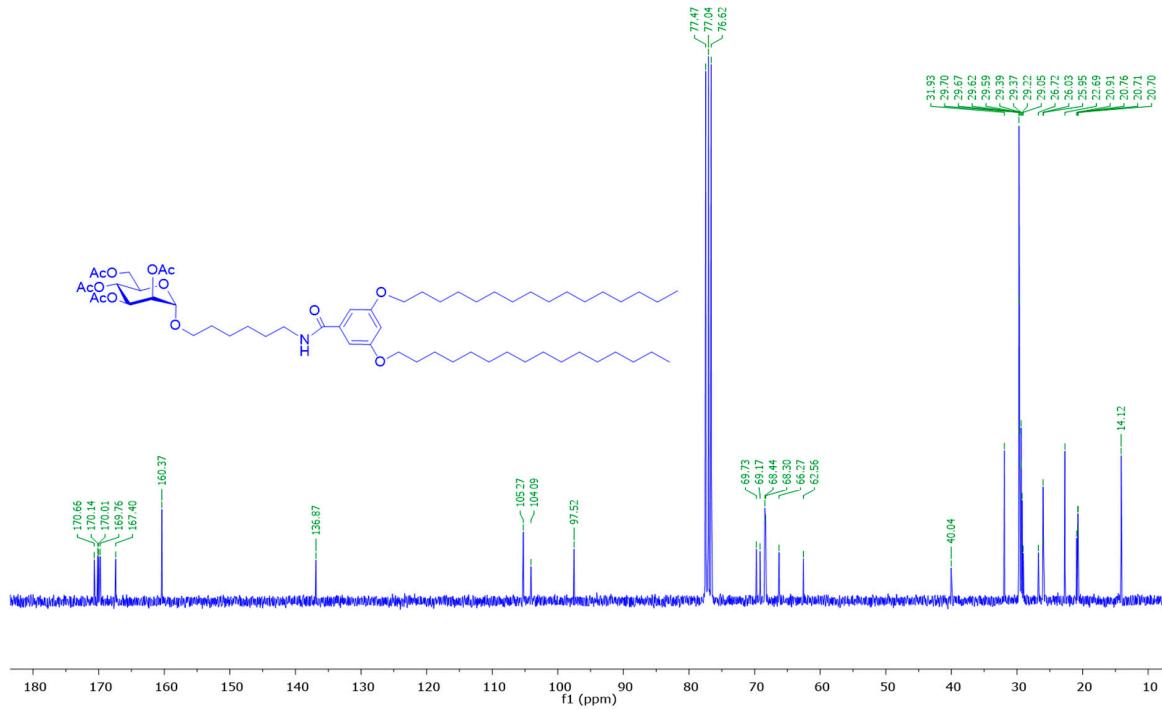
**Figure S4.**  $^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ ) of compound **18**.



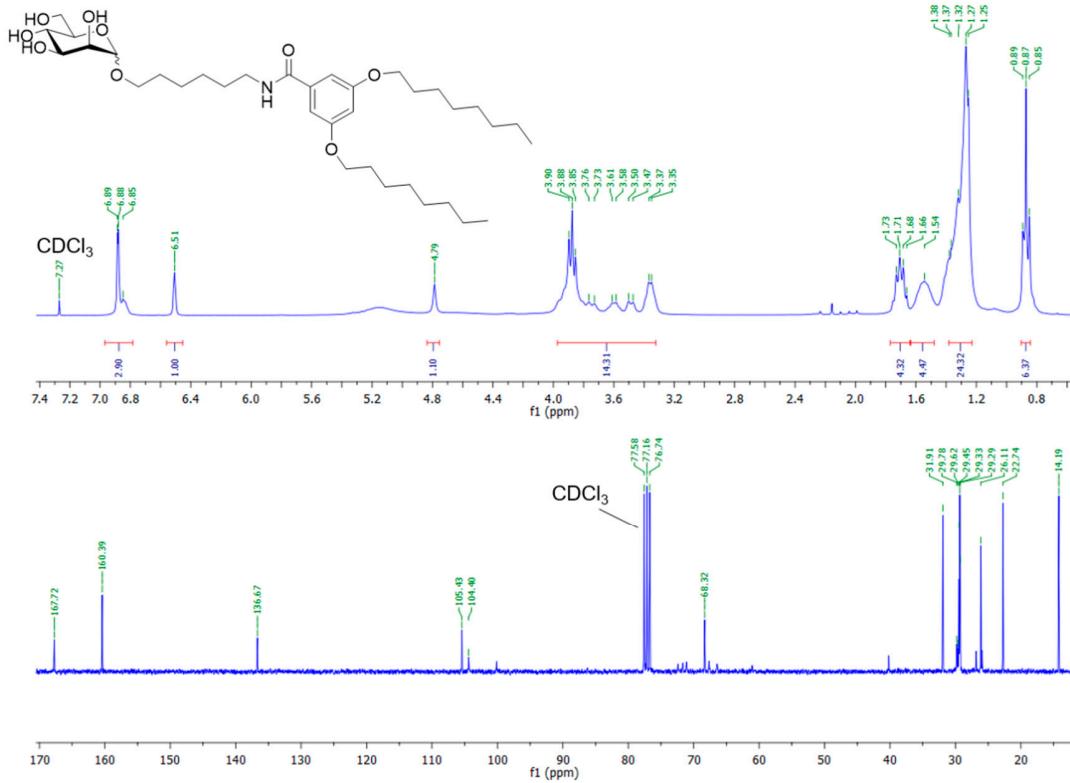
**Figure S5.**  $^1\text{H}$ -NMR and  $^{13}\text{C}$ -NMR (300 and 75 MHz,  $\text{CDCl}_3$ ) of compound **19**.



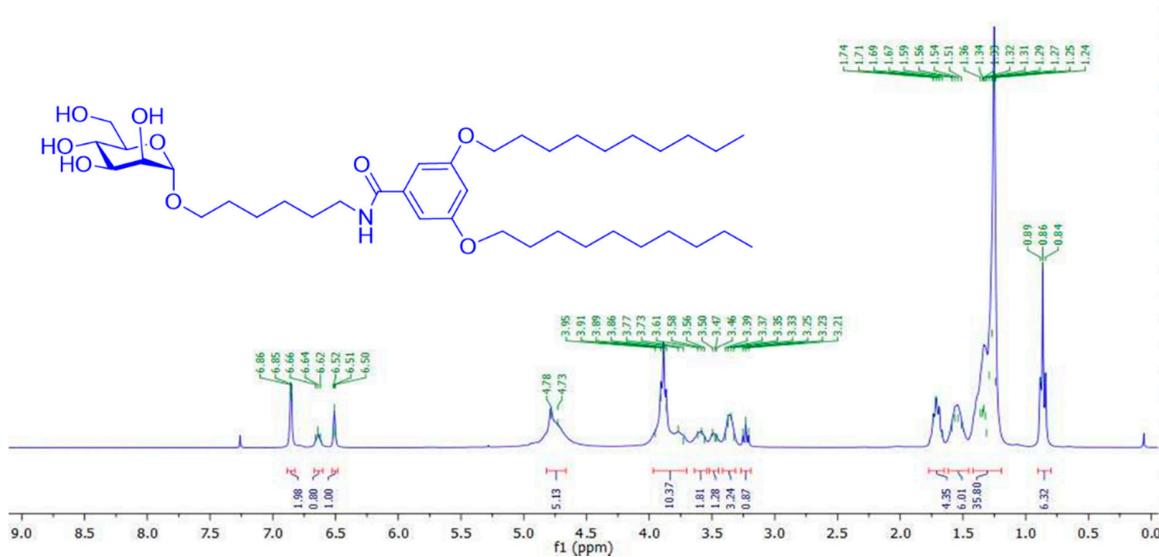
**Figure S6.**  $^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ ) of compound 20.



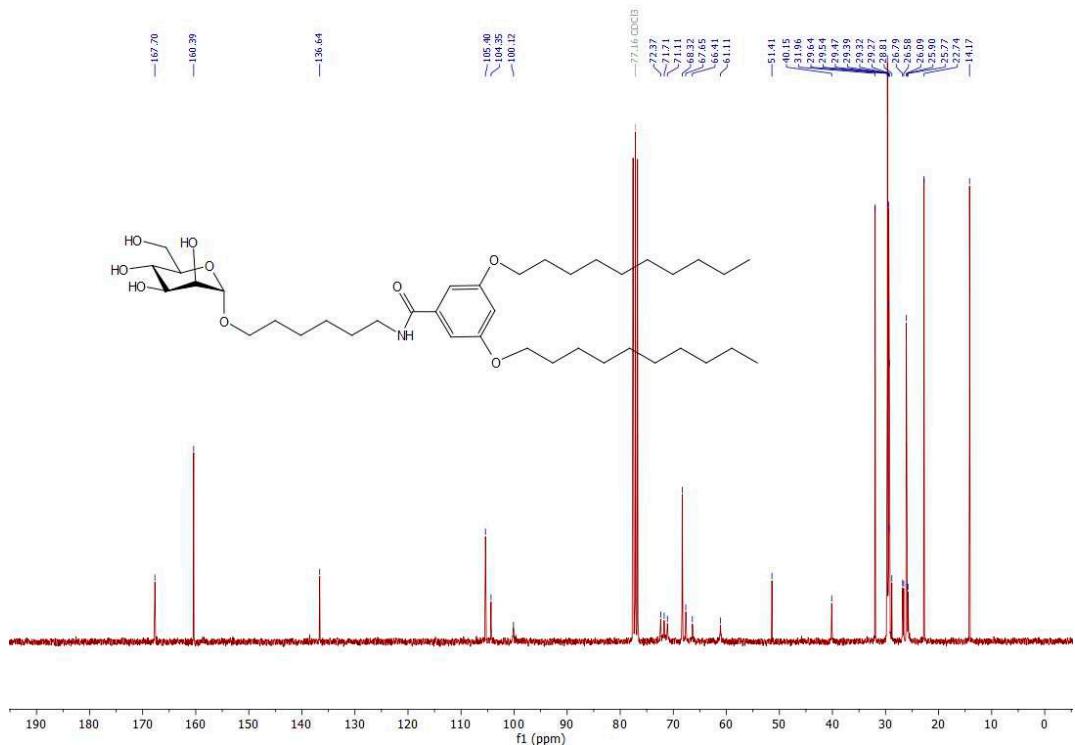
**Figure S7.**  $^{13}\text{C}$ -NMR (75MHz,  $\text{CDCl}_3$ ) of compound 20.



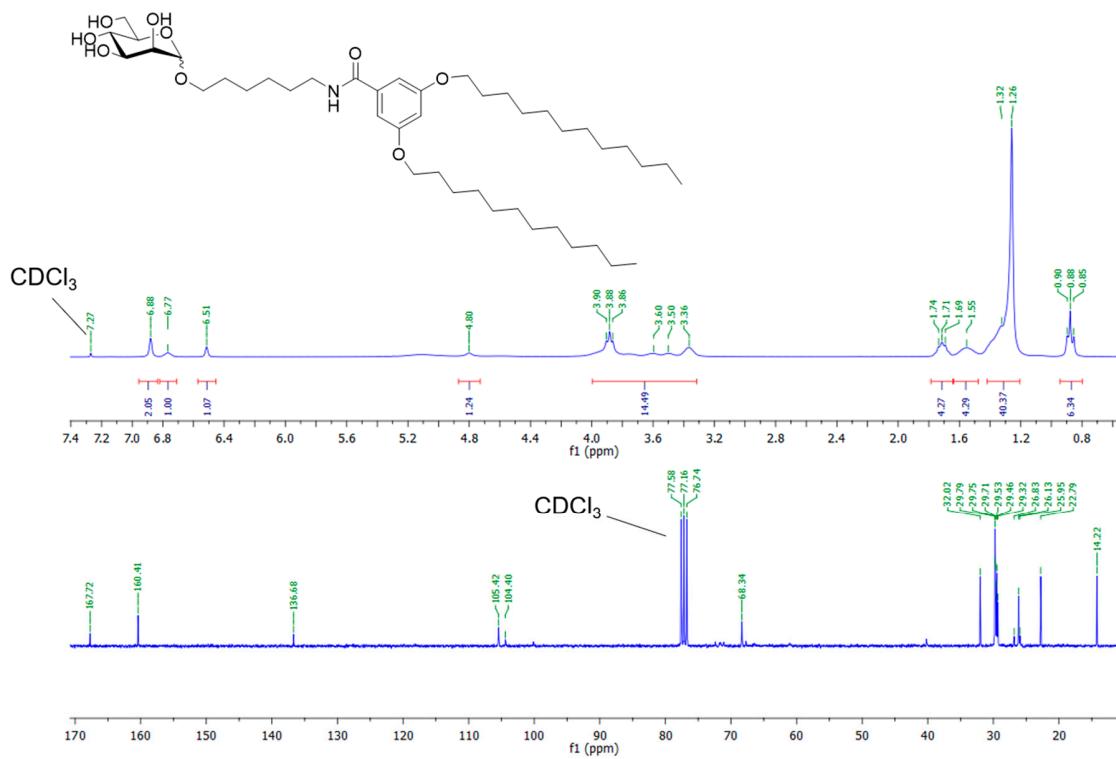
**Figure S8.**  $^1\text{H}$ -NMR and  $^{13}\text{C}$ -NMR (300 and 75 MHz,  $\text{CDCl}_3$ ) of compound 21.



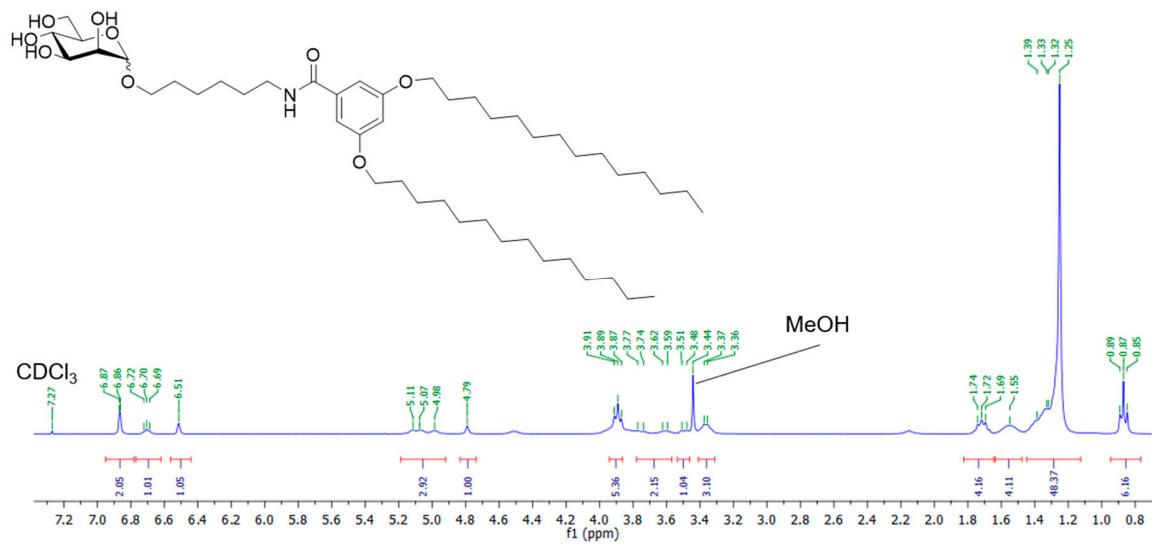
**Figure S9.**  $^1\text{H}$ -NMR-NMR (300 MHz,  $\text{CDCl}_3$ ) of compound 22.



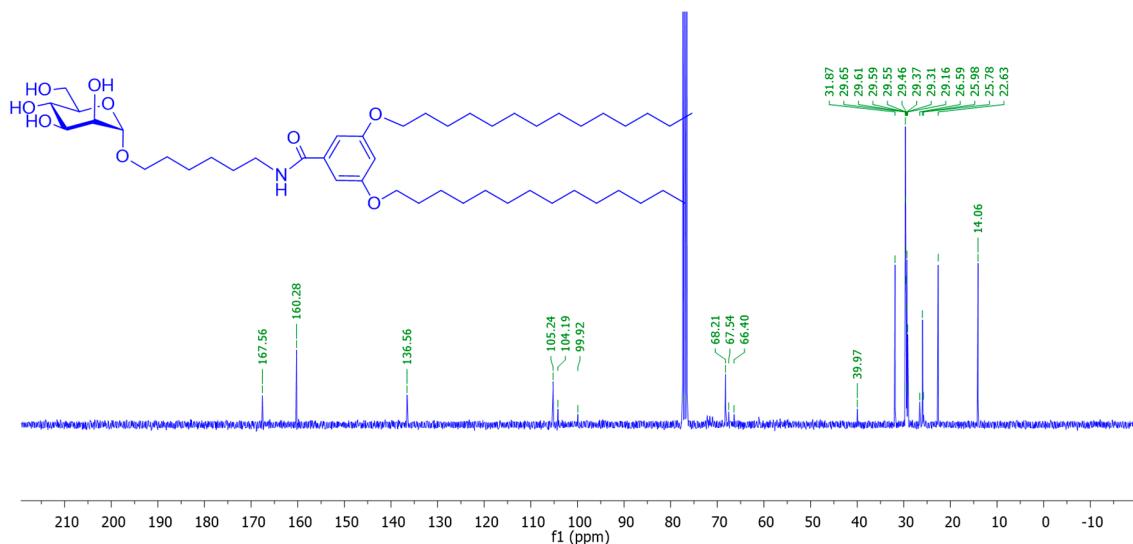
**Figure S10.**  $^{13}\text{C}$ -NMR (75 MHz, CDCl<sub>3</sub>) of compound 22.



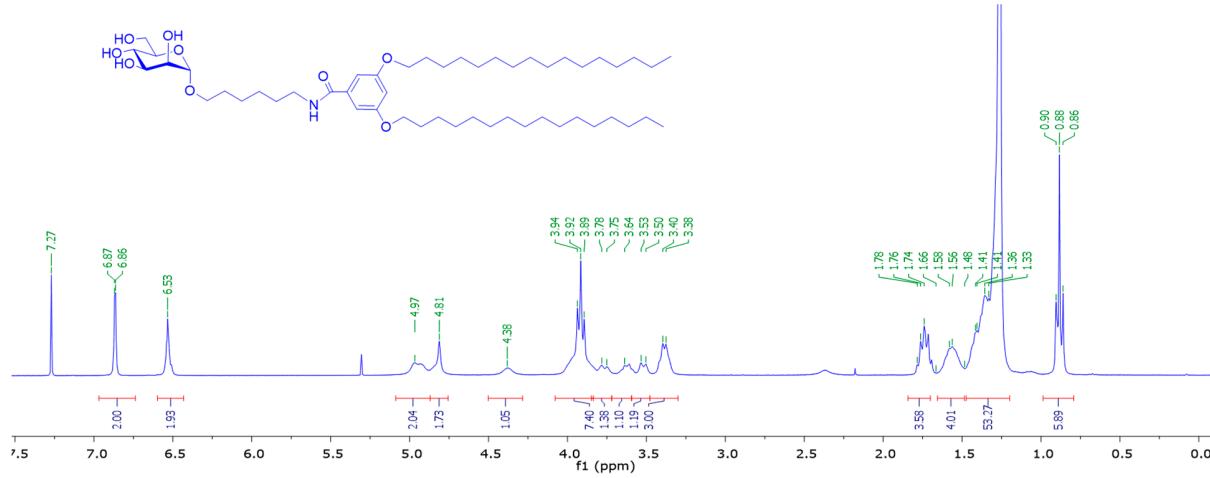
**Figure S11.**  $^1\text{H}$ -NMR and  $^{13}\text{C}$ -NMR (75 MHz, CDCl<sub>3</sub>) of compound 23.



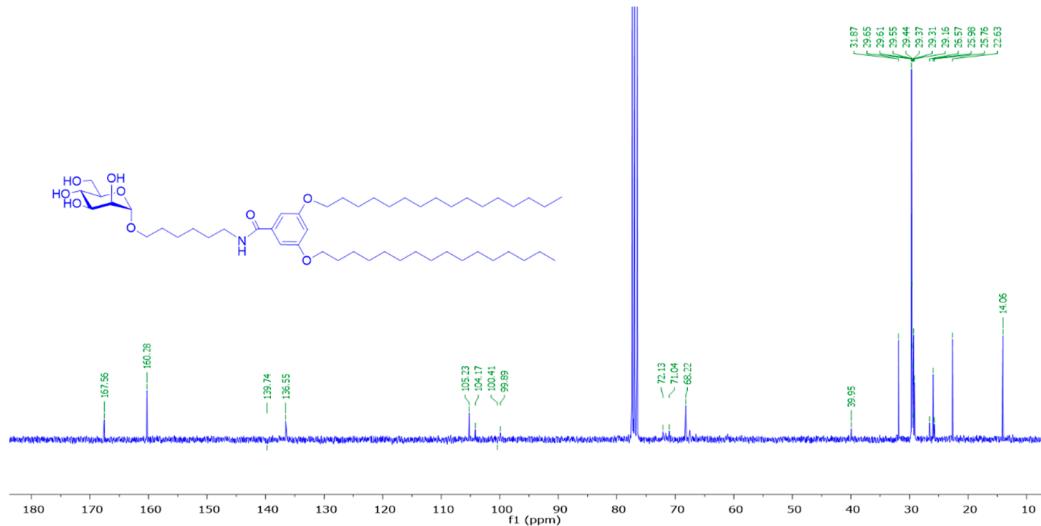
**Figure S12.** <sup>1</sup>H-NMR (300 MHz, CDCl<sub>3</sub>) of compound 24.



**Figure S13.** <sup>13</sup>C-NMR (300 MHz, CDCl<sub>3</sub>) of compound 24.



**Figure S14.**  $^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ ) of compound **25**.



**Figure S15.**  $^{13}\text{C}$ -NMR (75 MHz,  $\text{CDCl}_3$ ) of compound **25**.