

# Supplementary Materials: Antimicrobial Activity of Monoramnholipids Produced by Bacterial Strains Isolated from Ross Sea (Antarctica)

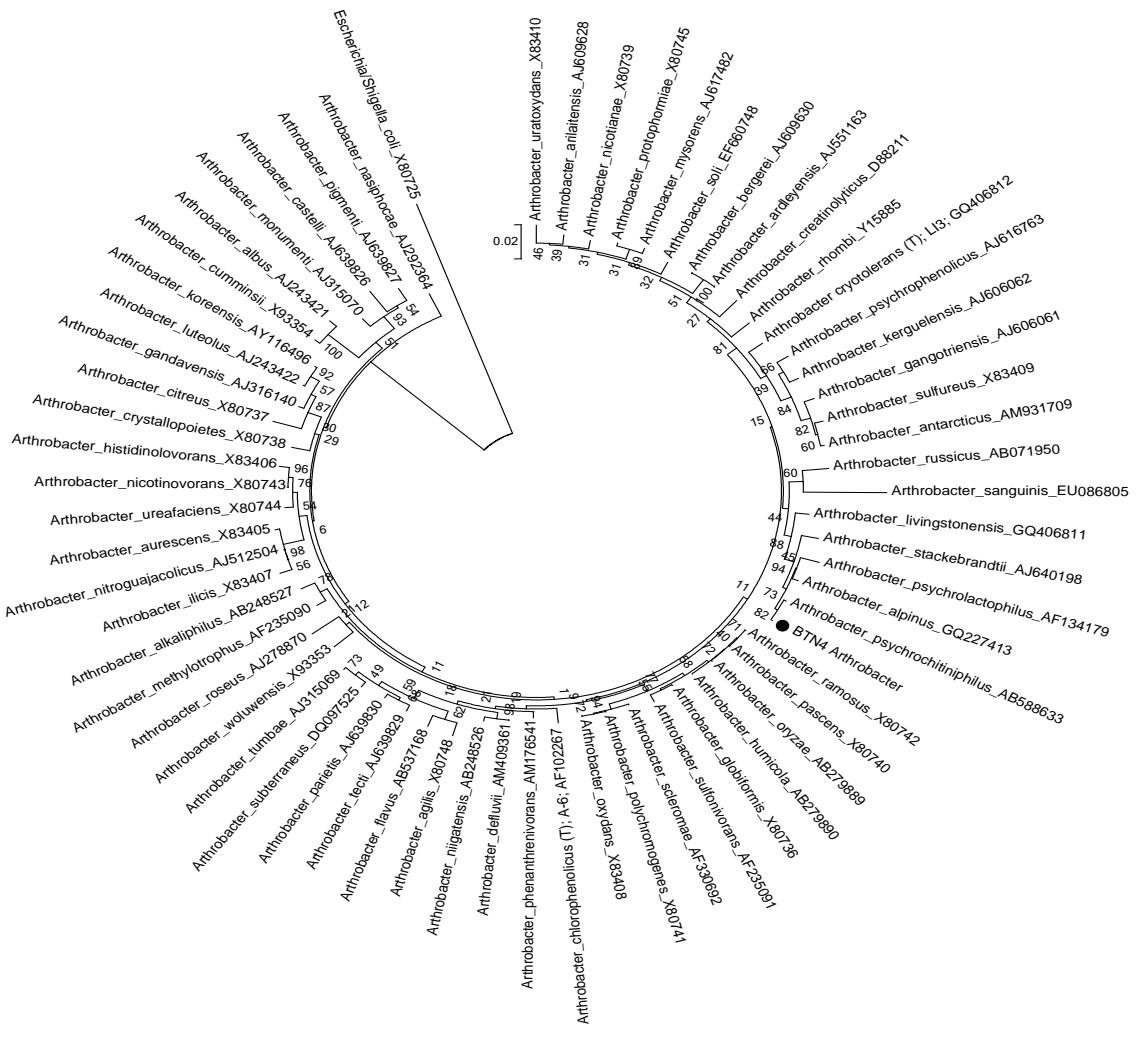
Pietro Tedesco, Isabel Maida, Fortunato Palma Esposito, Emiliana Tortorella, Karolina Subko, Chidinma Christiana Ezeofor, Ying Zhang, Jioji Tabudravu, Marcel Jaspars, Renato Fani and Donatella de Pascale

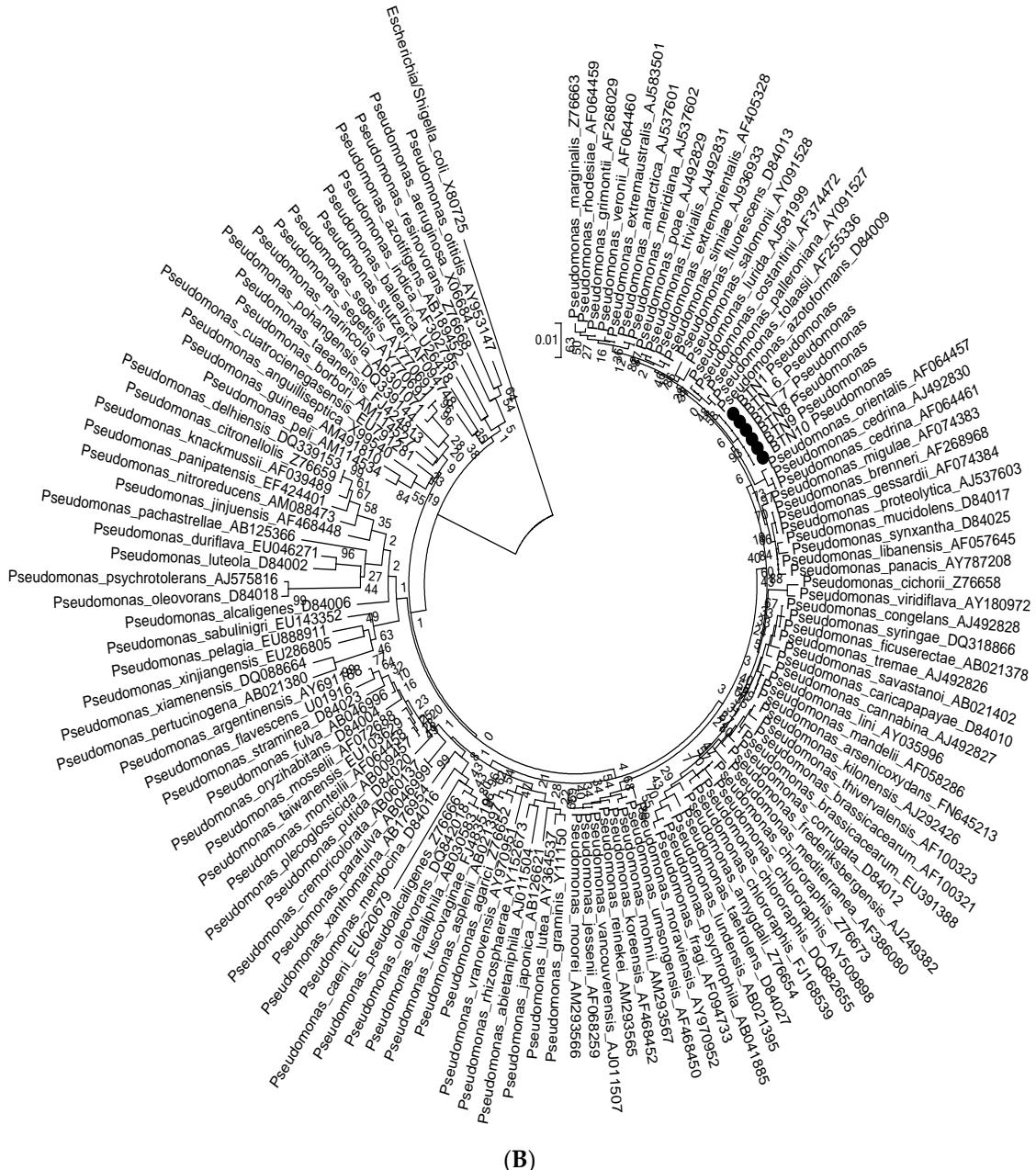
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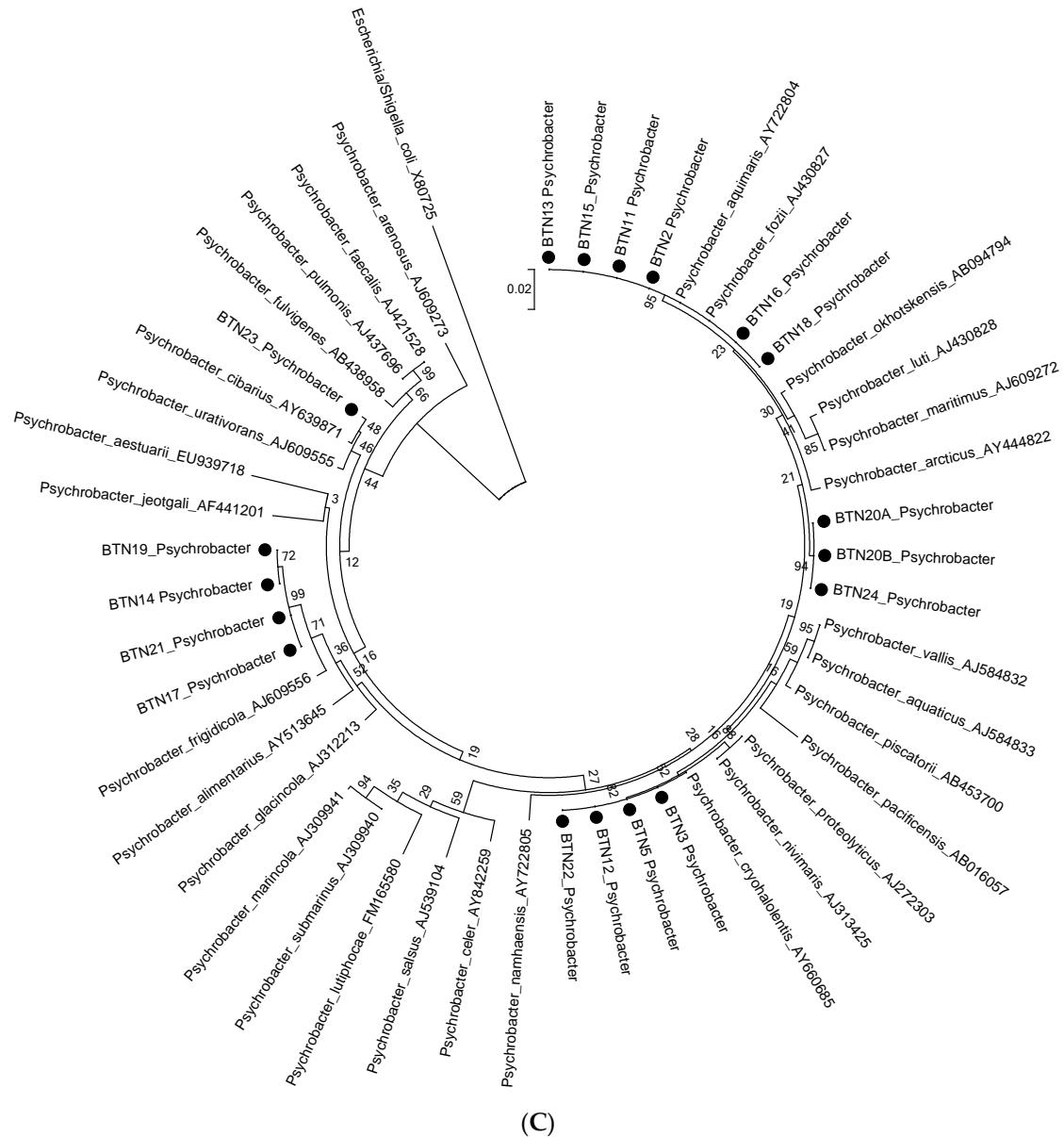
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**Table S1.** Cross-streaking experiments of BTN isolates against a wide panel of Bcc strains. The Bcc strains highlighted in red correspond to type strains. Symbols: +, growth;  $\pm$ , reduced growth; -, no growth; C+, positive controls, i.e., Bcc strains grown in the absence of the tester strain(s). Abbreviations: *Ps*, *Pseudomonas*; *Ar*, *Arthrobacter*; CF, Cystic Fibrosis; Env, environmental.

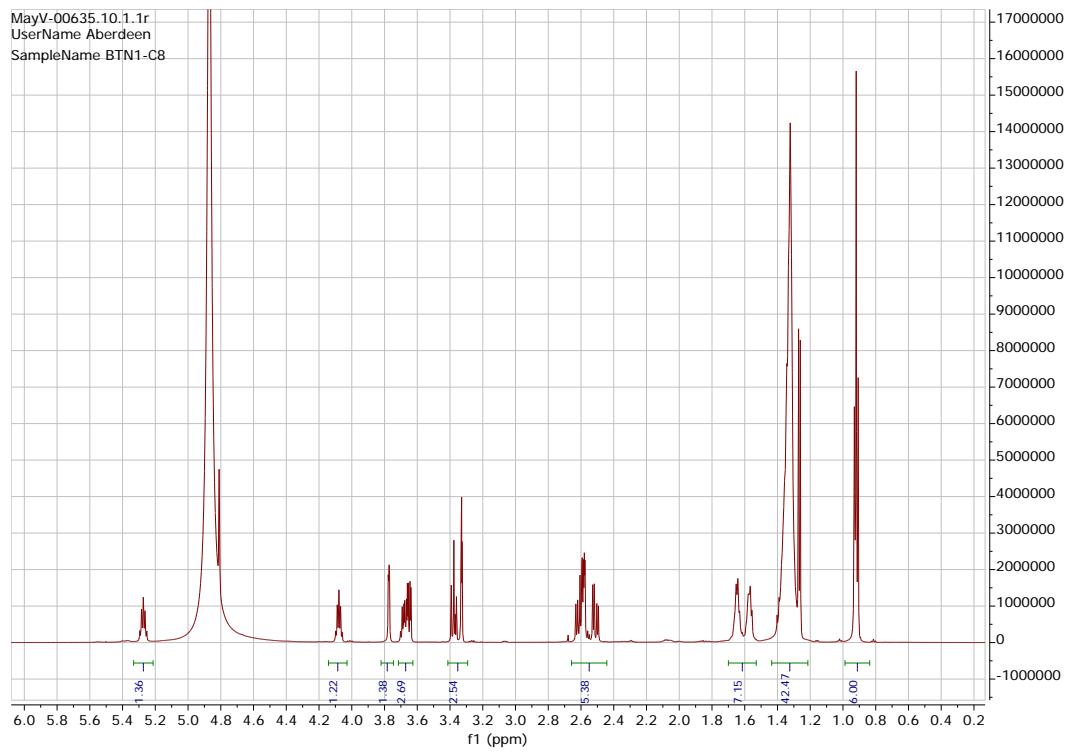
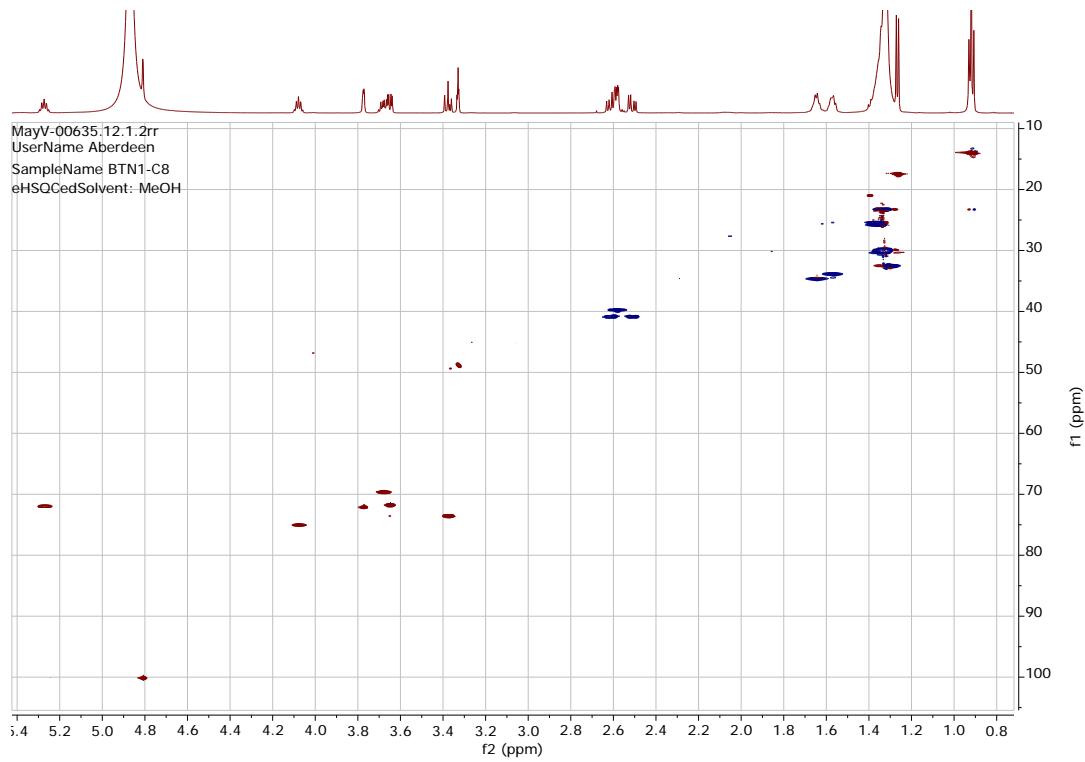
## Supplementary material

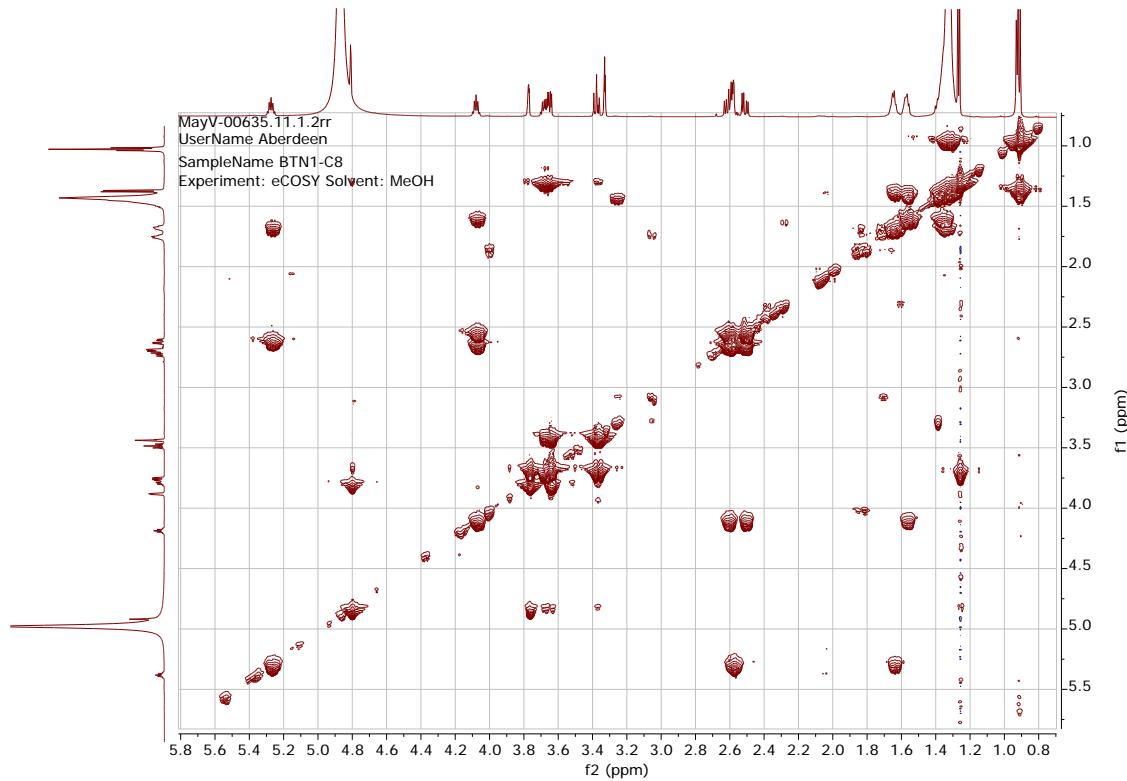




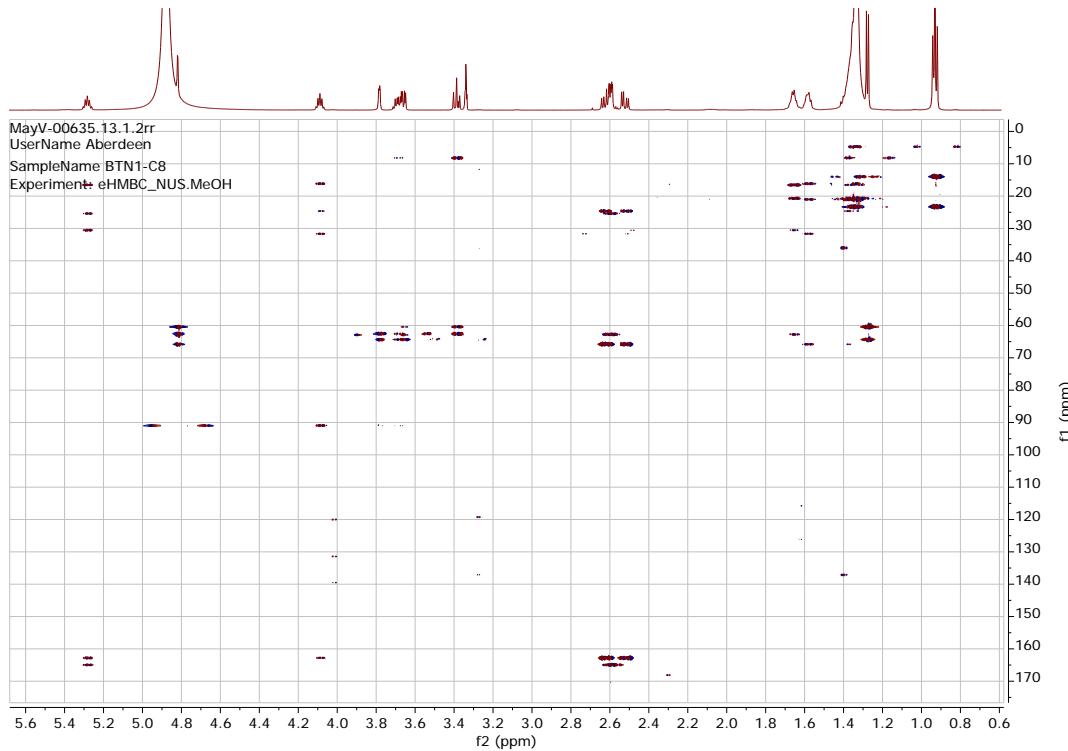


**Figure S1.** Phylogenetic trees (using the complete deletion option) of the *Arthrobacter* (**A**); *Pseudomonas* (**B**) and *Psychrobacter* (**C**) genera.

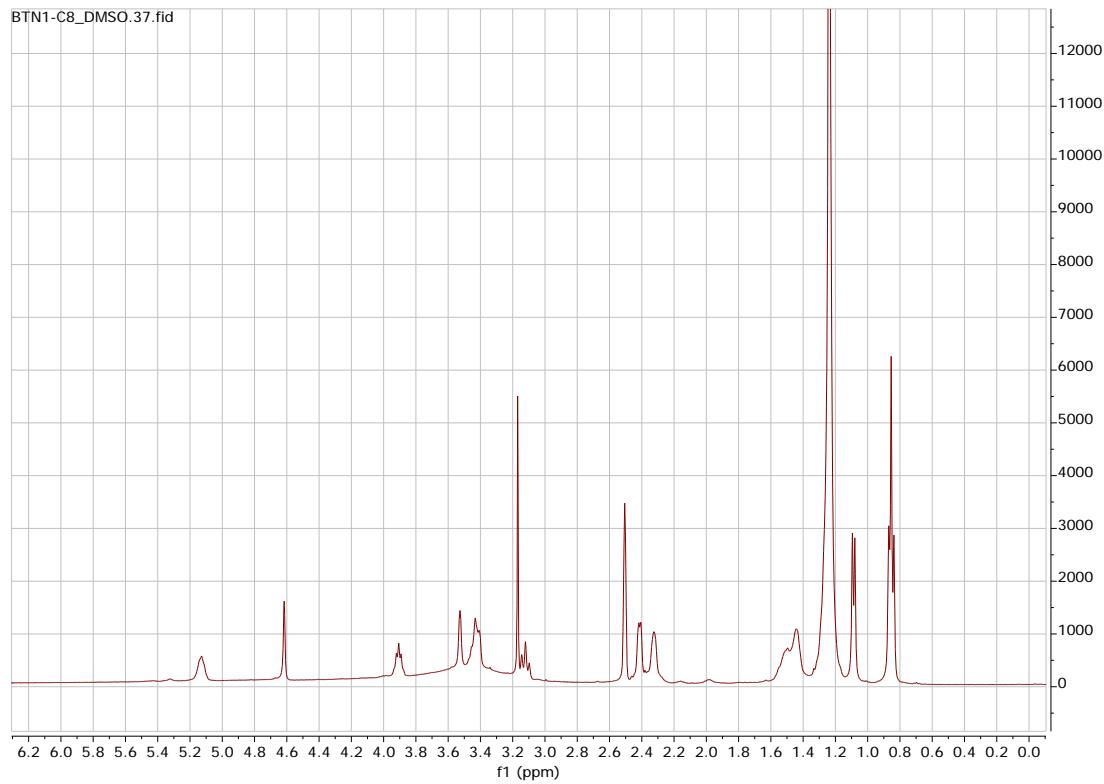
**Figure S2.**  $^1\text{H}$ -NMR spectrum of compound 1 in  $\text{CD}_3\text{OD}$  at 600 MHz.**Figure S3.** Edited-HSQC spectrum of compound 1 in  $\text{CD}_3\text{OD}$  at 600 MHz.



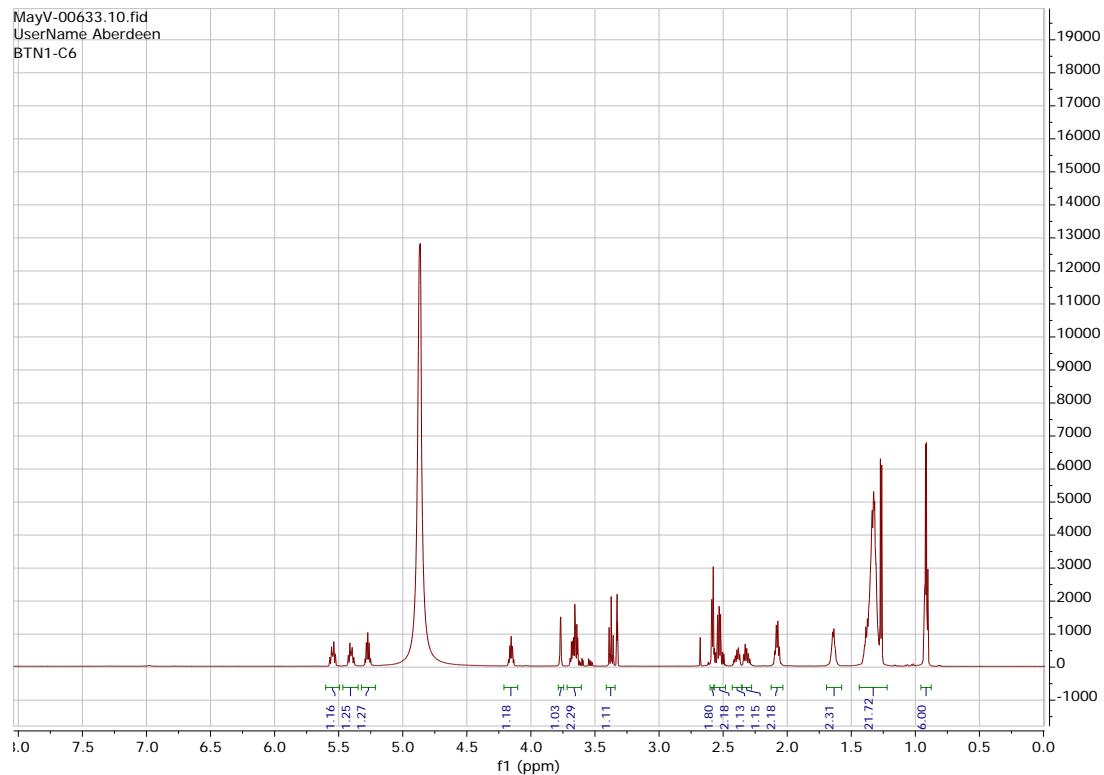
**Figure S4.** COSY NMR spectrum of compound 1 in  $\text{CD}_3\text{OD}$  at 600 MHz.



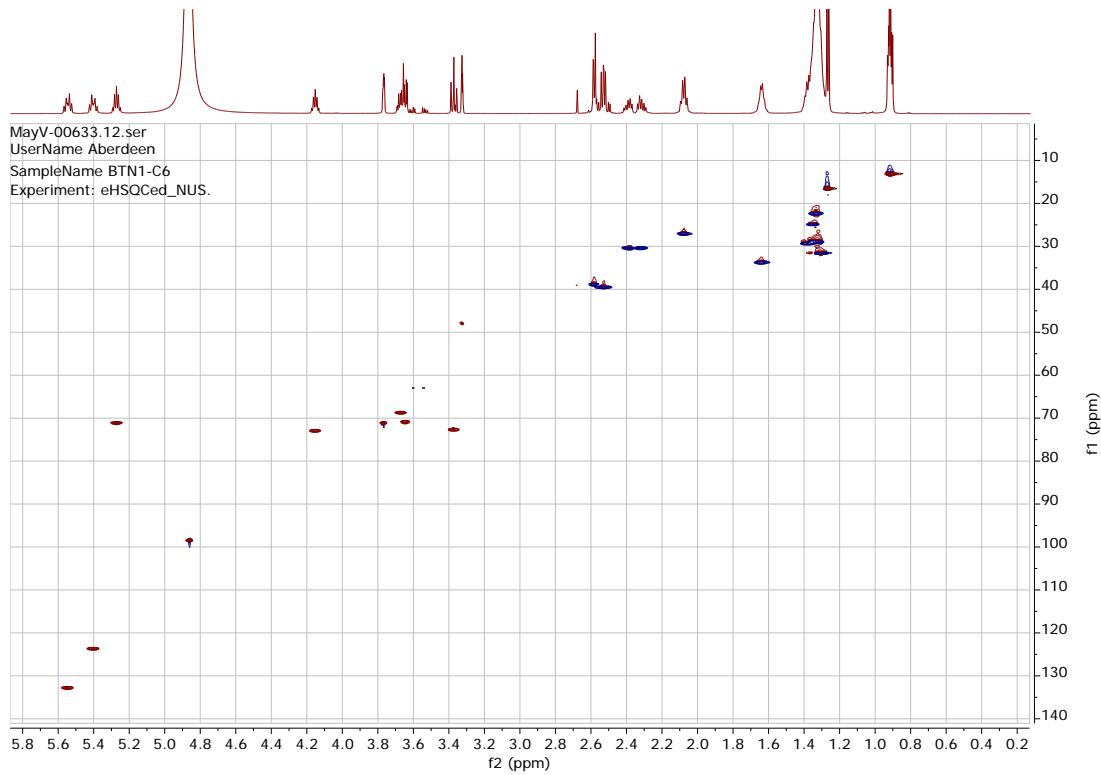
**Figure S5.** HMBC spectrum of compound 1 in  $\text{CD}_3\text{OD}$  at 600 MHz.



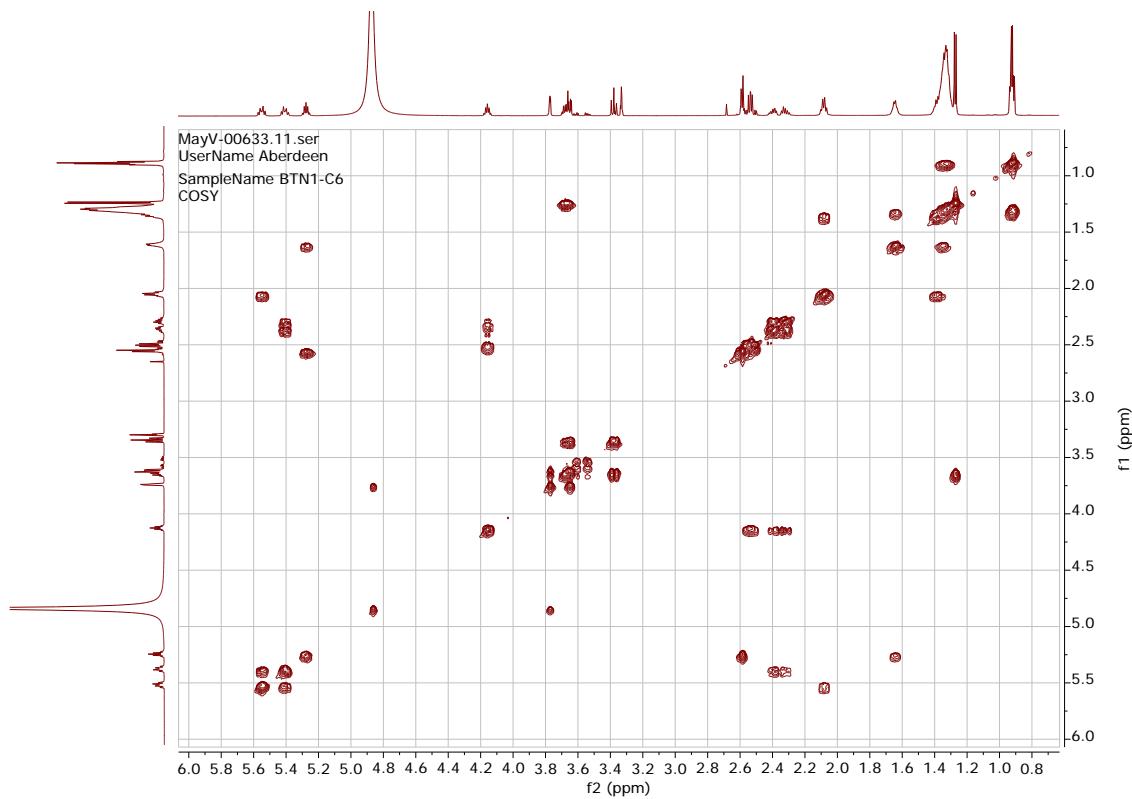
**Figure S6.**  $^1\text{H}$ -NMR spectrum of compound **1** in  $\text{DMSO-d}_6$  at 400 MHz.



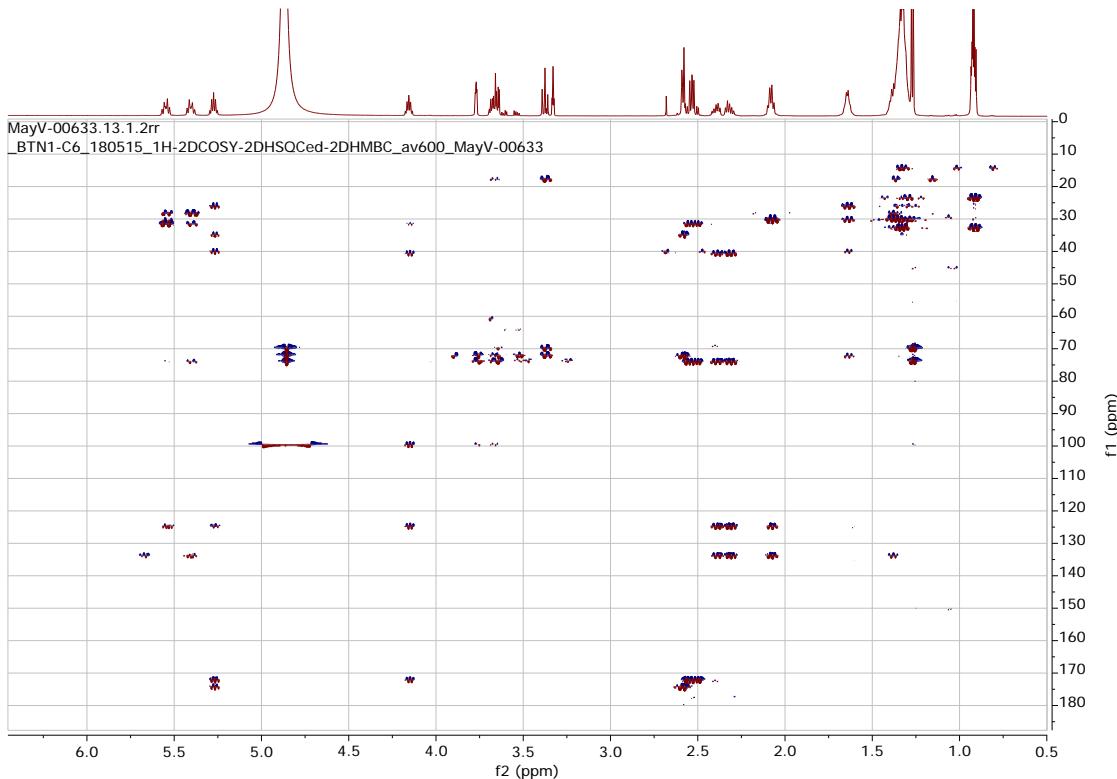
**Figure S7.**  $^1\text{H}$ -NMR spectrum of compound **2** in  $\text{CD}_3\text{OD}$  at 600 MHz.

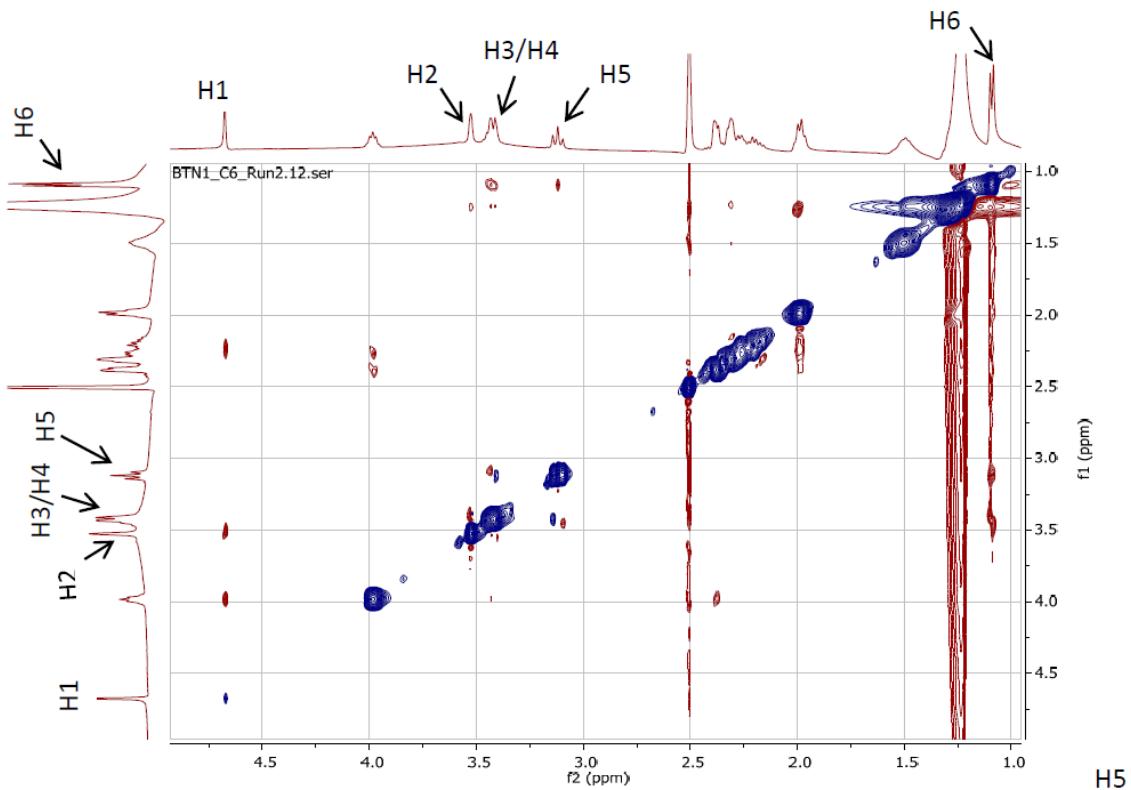


**Figure S8.** Edited-HSQC NMR spectrum of compound **2** in  $\text{CD}_3\text{OD}$ .

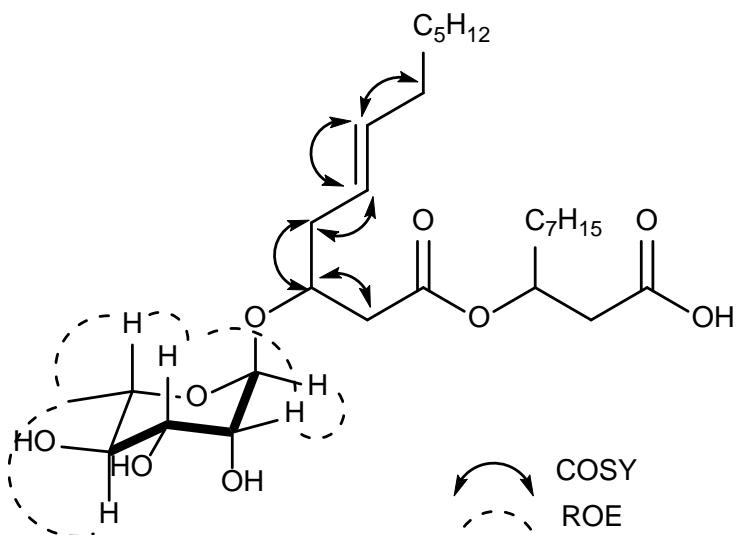


**Figure S9.** COSY NMR spectrum of compound **2** in  $\text{CD}_3\text{OD}$ .

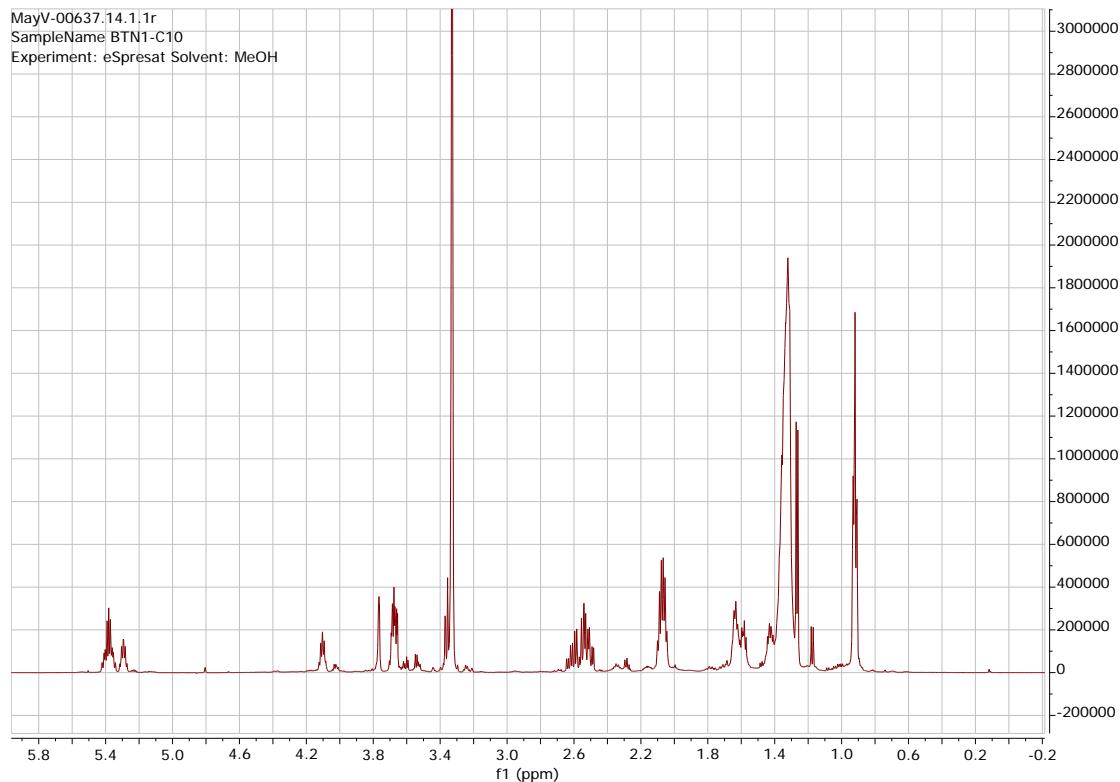




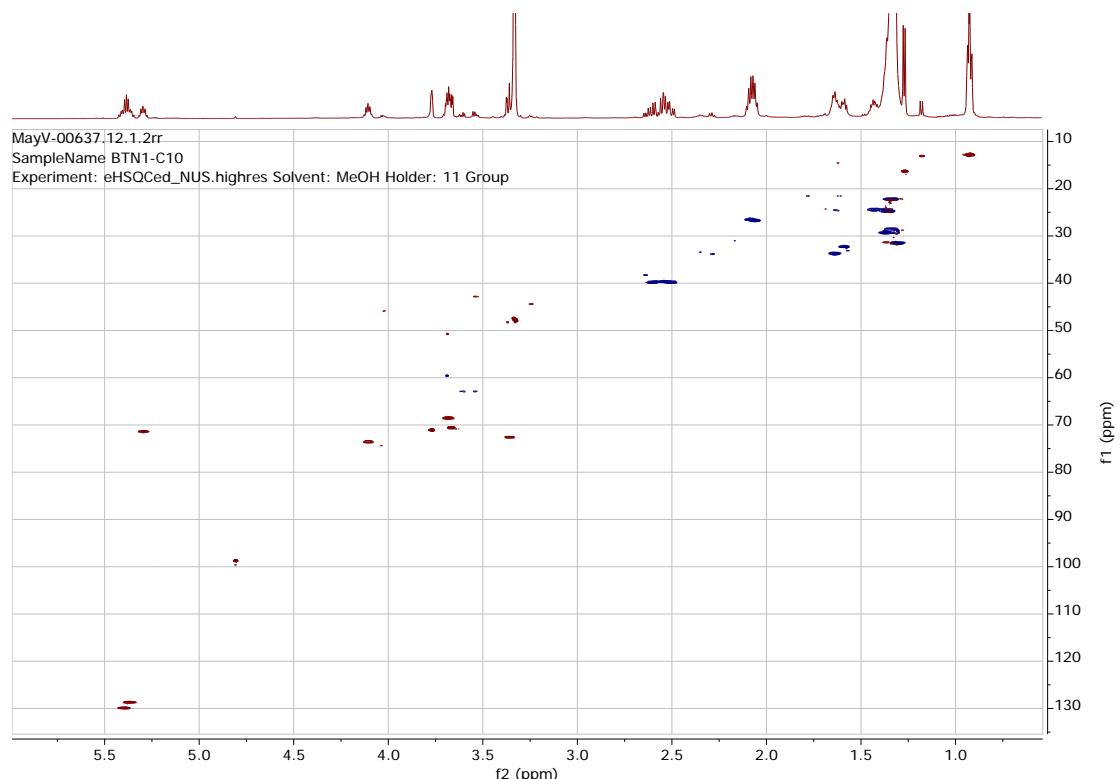
**Figure S12.** 2D ROESY spectrum of compound **2** in DMSO-d<sub>6</sub> with Rhamnose protons labelled.



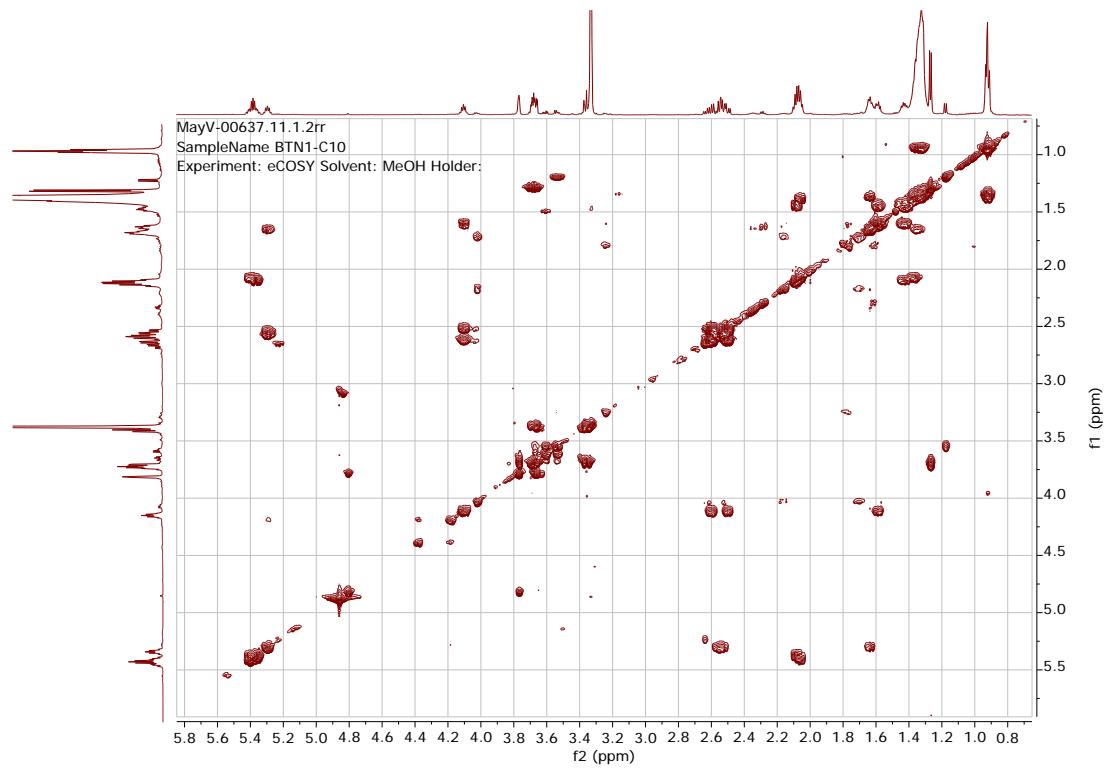
**Figure S13.** Compound **2** showing selected ROE correlations of the rhamnose moiety and COSY correlations showing position of unsaturation of the lipid chain.



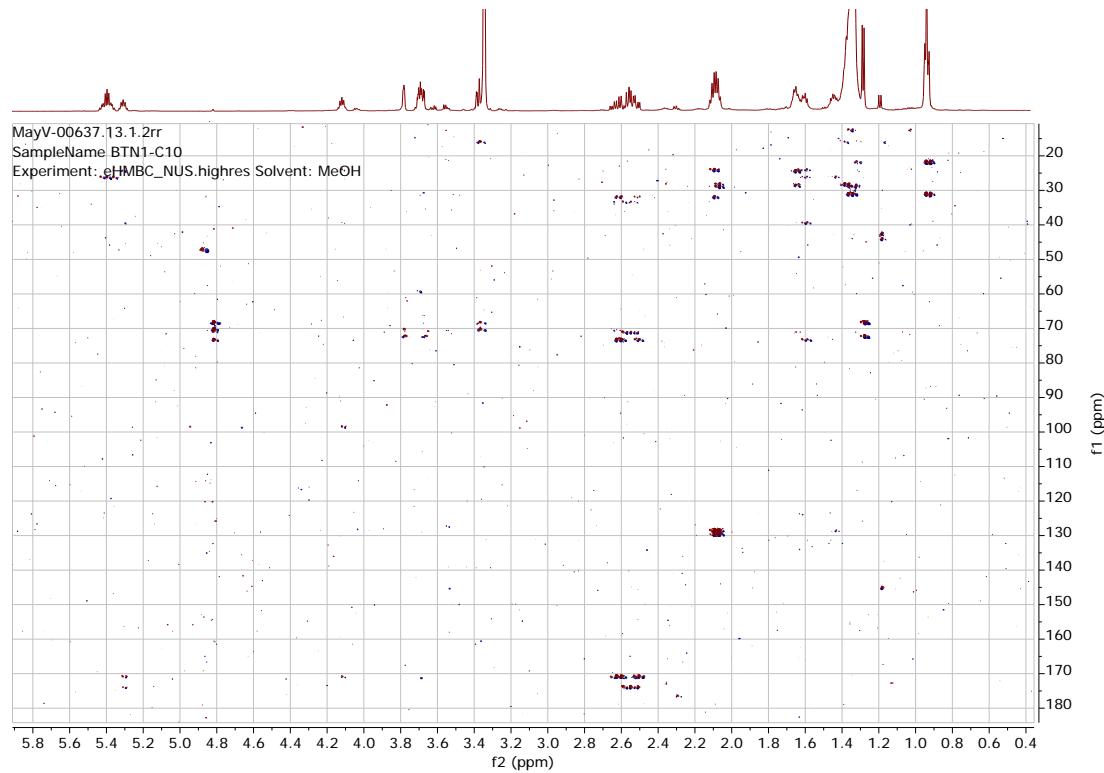
**Figure S14.**  $^1\text{H}$ -NMR spectrum of compound 3 in  $\text{CD}_3\text{OD}$  at 600 MHz.



**Figure S15.** Edited-HSQC NMR spectrum of compound 3 in  $\text{CD}_3\text{OD}$ .



**Figure S16.** COSY NMR spectrum of compound 3 in  $\text{CD}_3\text{OD}$ .



**Figure S17.** HMBC NMR spectrum of compound 3 in  $\text{CD}_3\text{OD}$ .

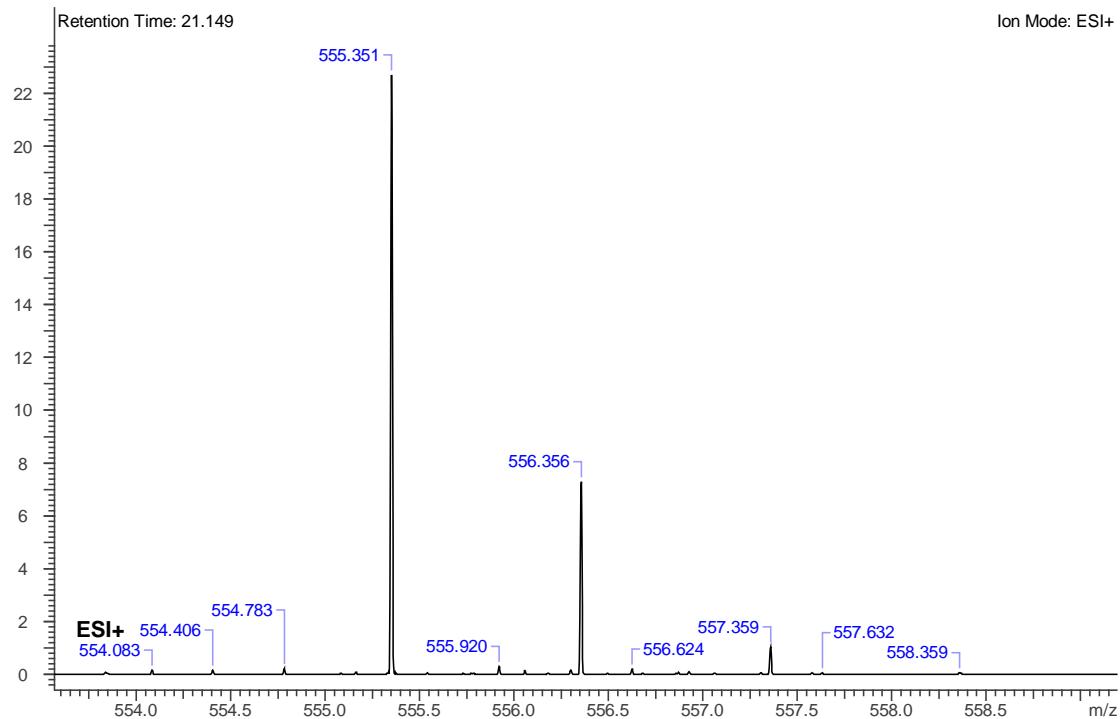
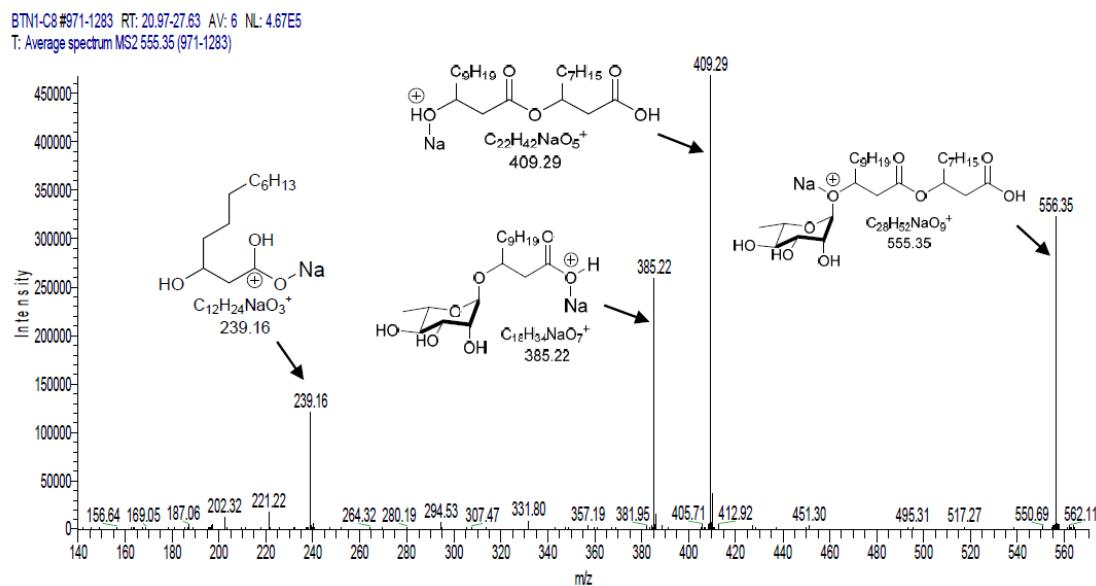
Figure S18. HRESIMS spectrum ( $M + \text{Na}$ )<sup>+</sup> of compound 1.

Figure S19. ESI MS/MS data of compound 1.

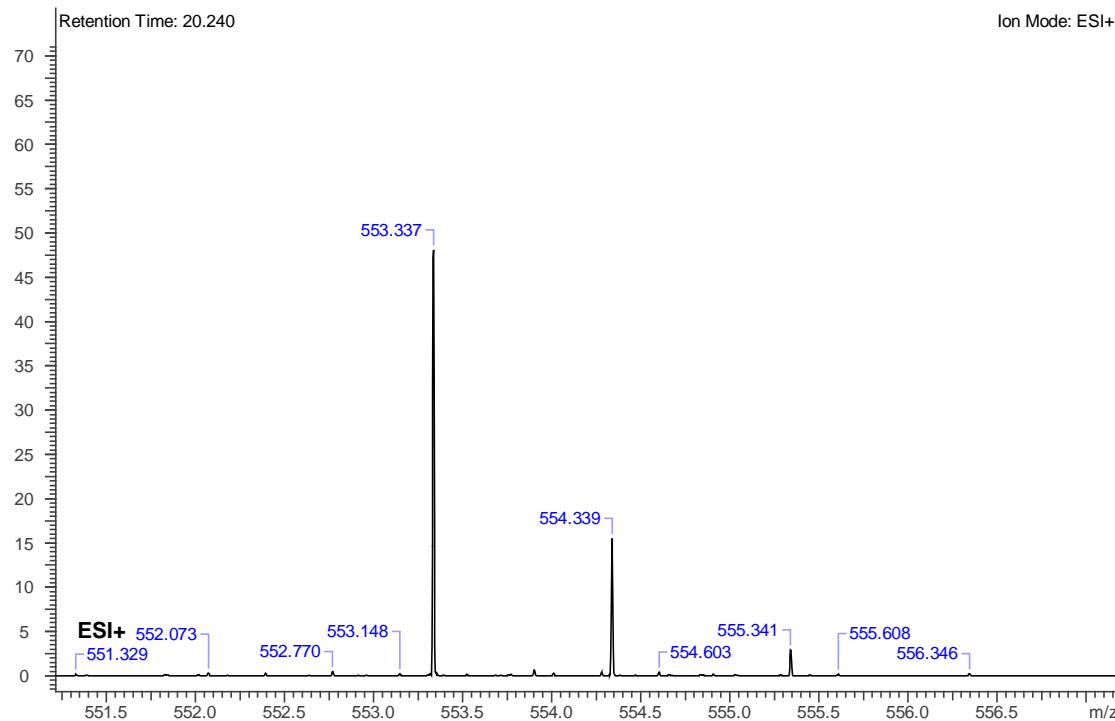
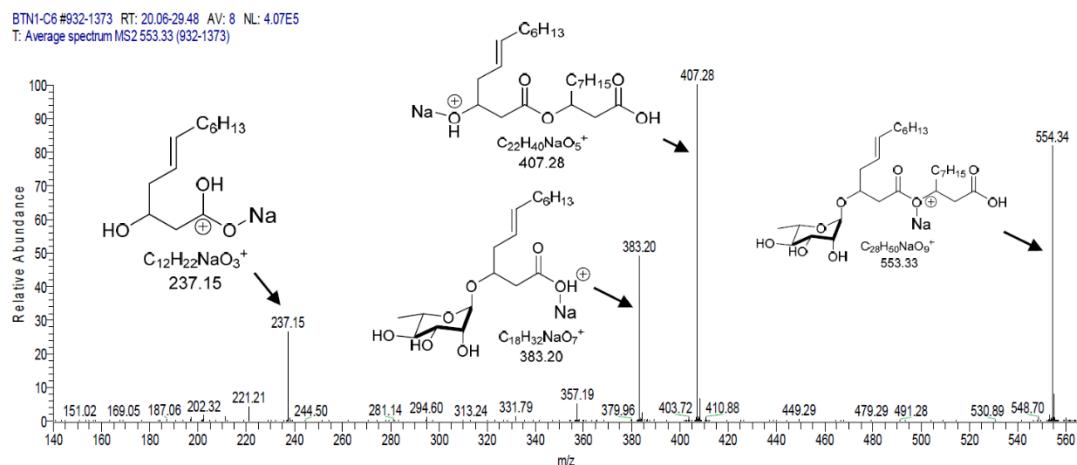
Figure S20. HRESIMS spectrum ( $M + \text{Na}$ )<sup>+</sup> of compound 2.

Figure S21. ESI MS/MS data of compound 2.

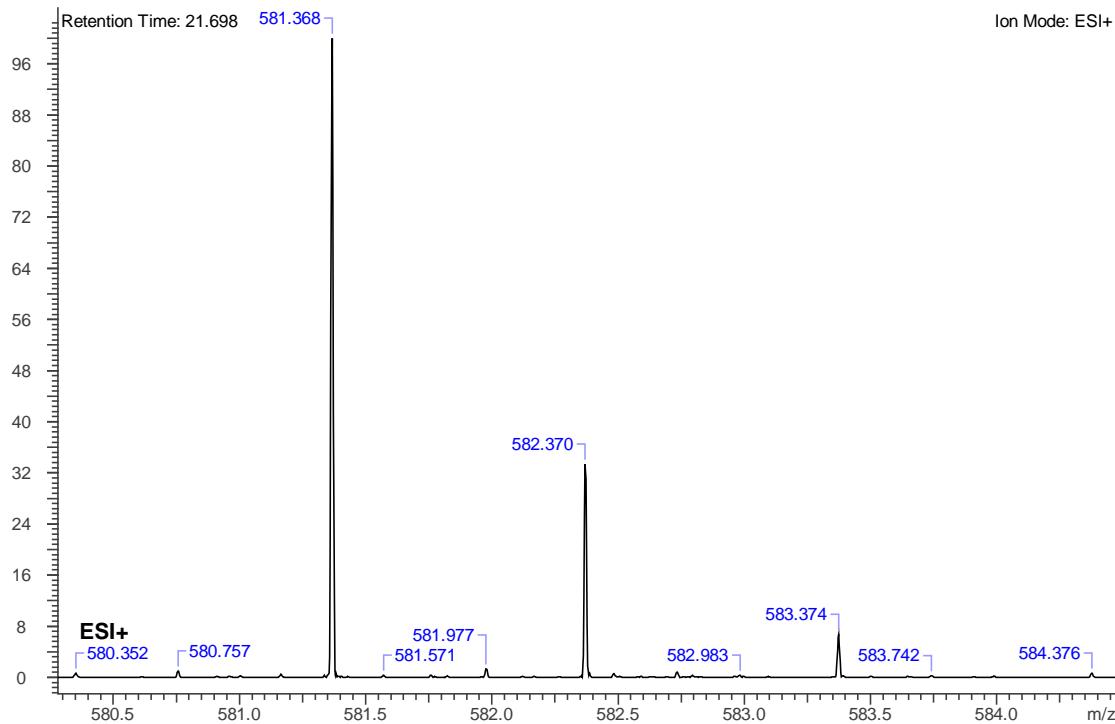
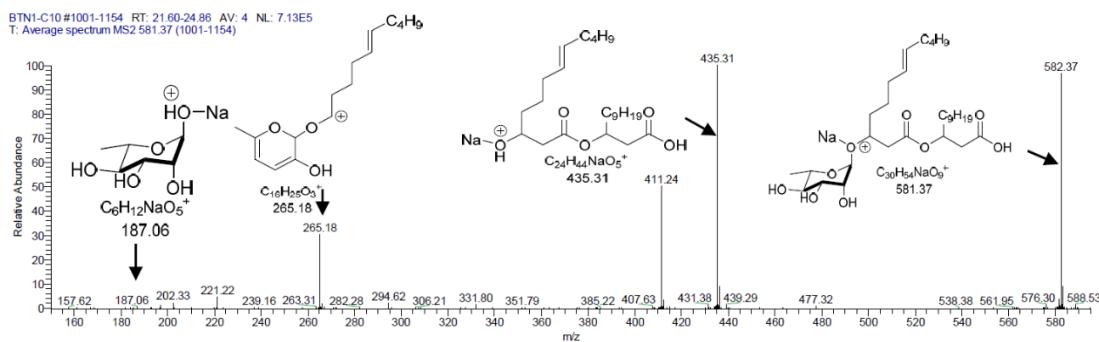
Figure S22. HRESIMS spectrum ( $M + Na$ )<sup>+</sup> of compound 3.

Figure S23. ESI MS/MS data for compound 3.

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