

Supporting Information

Bacteriophage-mediated glucosylation can modify lipopolysaccharide O antigens synthesized by an ABC transporter-dependent assembly mechanism

Evan Mann, Olga G. Ovchinnikova, Jerry D. King, and Chris Whitfield*

From the Department of Molecular and Cellular Biology, University of Guelph, Guelph, Ontario, N1G 2W1, Canada

*To whom correspondence should be addressed: Chris Whitfield, Dept. of Molecular and Cellular Biology, University of Guelph, 50 Stone Rd. East, Guelph, Ontario, N1G 2W1, Canada. Tel.: 519-824-4120 (Ext. 53361); E-mail: cwhitfie@uoguelph.ca.

E.M. and O.G.O. contributed equally to this work.

Content

2D NMR spectra of the O-polysaccharide from *E. coli* CWG1217 $\Delta_{wzx-wbbK}$ transformed with the *R. terrigena* O-antigen gene cluster (pKM114).

Fig. S1. $^1\text{H}, ^1\text{H}$ COSY spectrum

Fig. S2. $^1\text{H}, ^1\text{H}$ TOCSY spectrum

Fig. S3. $^1\text{H}, ^1\text{H}$ NOESY spectrum

Fig. S4. $^1\text{H}, ^{13}\text{C}$ HMBC spectrum

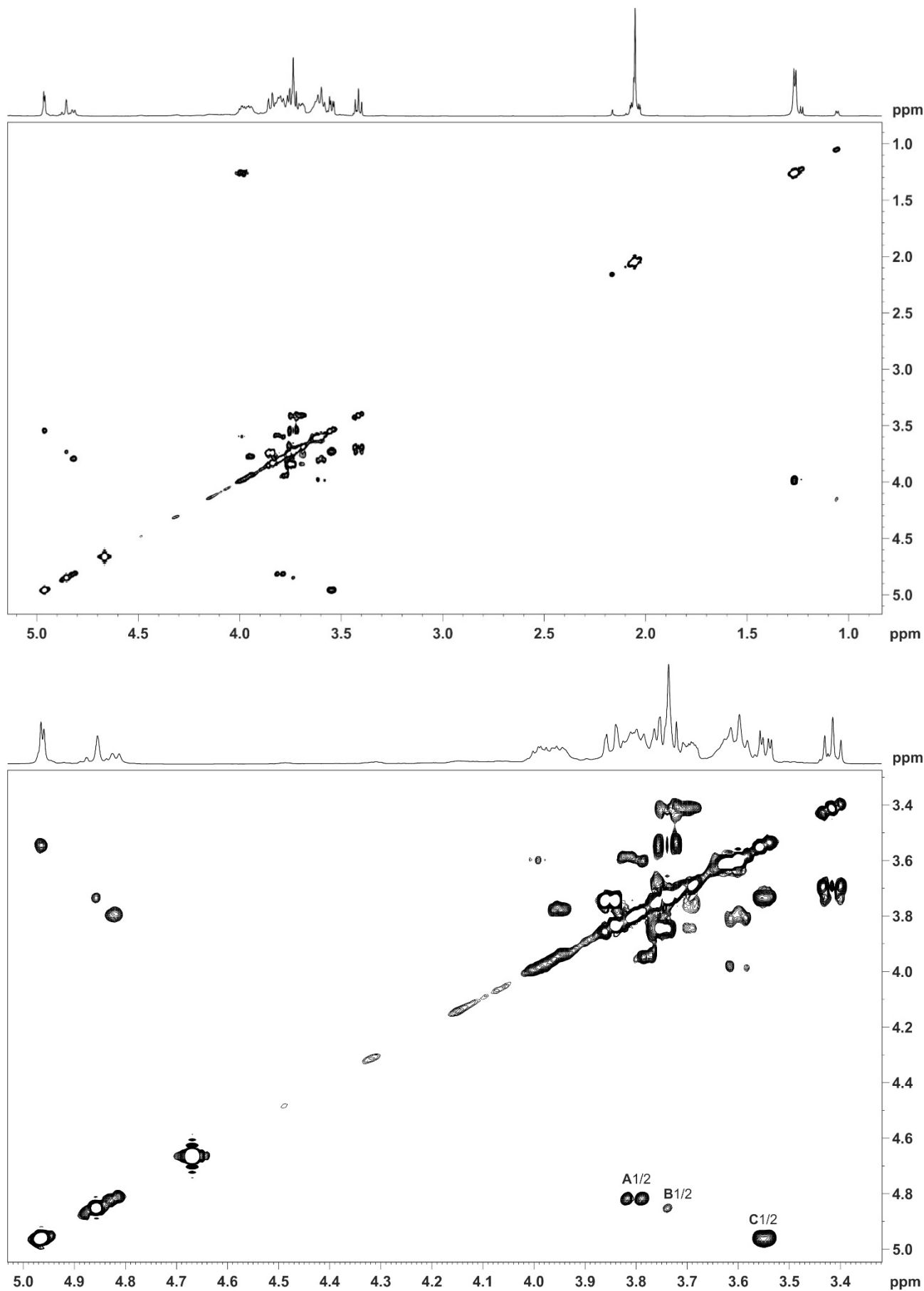


Figure S1. Full (top) and expanded (bottom) $^1\text{H}, ^1\text{H}$ COSY spectrum. Correlations between anomeric and ring protons are indicated. Sugar residues are designated as **A** (GlcNAc), **B** (Rha) and **C** (Glc).

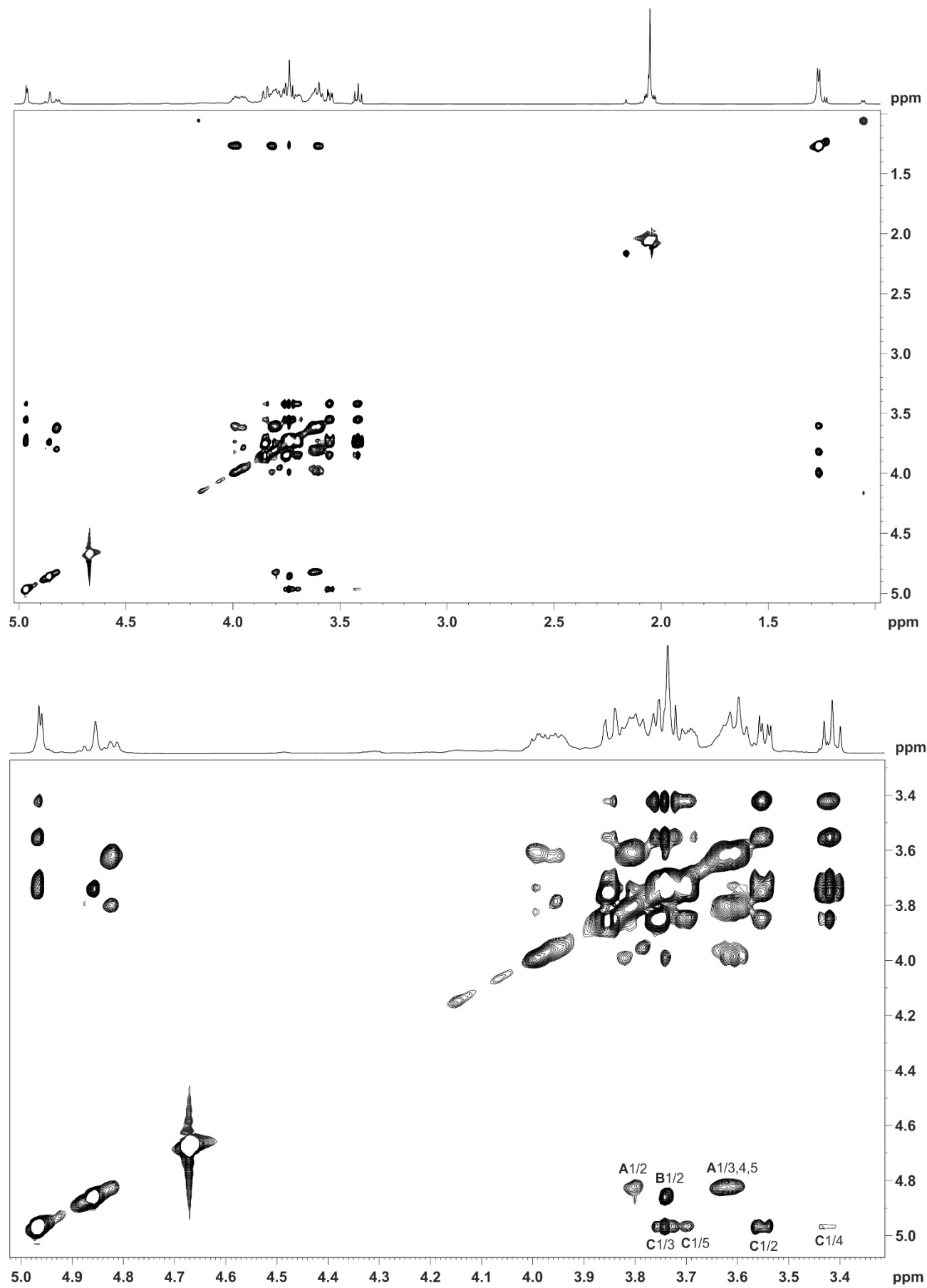


Figure S2. Full (top) and expanded (bottom) $^1\text{H}, ^1\text{H}$ TOCSY spectrum. Correlations between anomeric and ring protons are indicated. Sugar residues are designated as **A** (GlcNAc), **B** (Rha) and **C** (Glc).

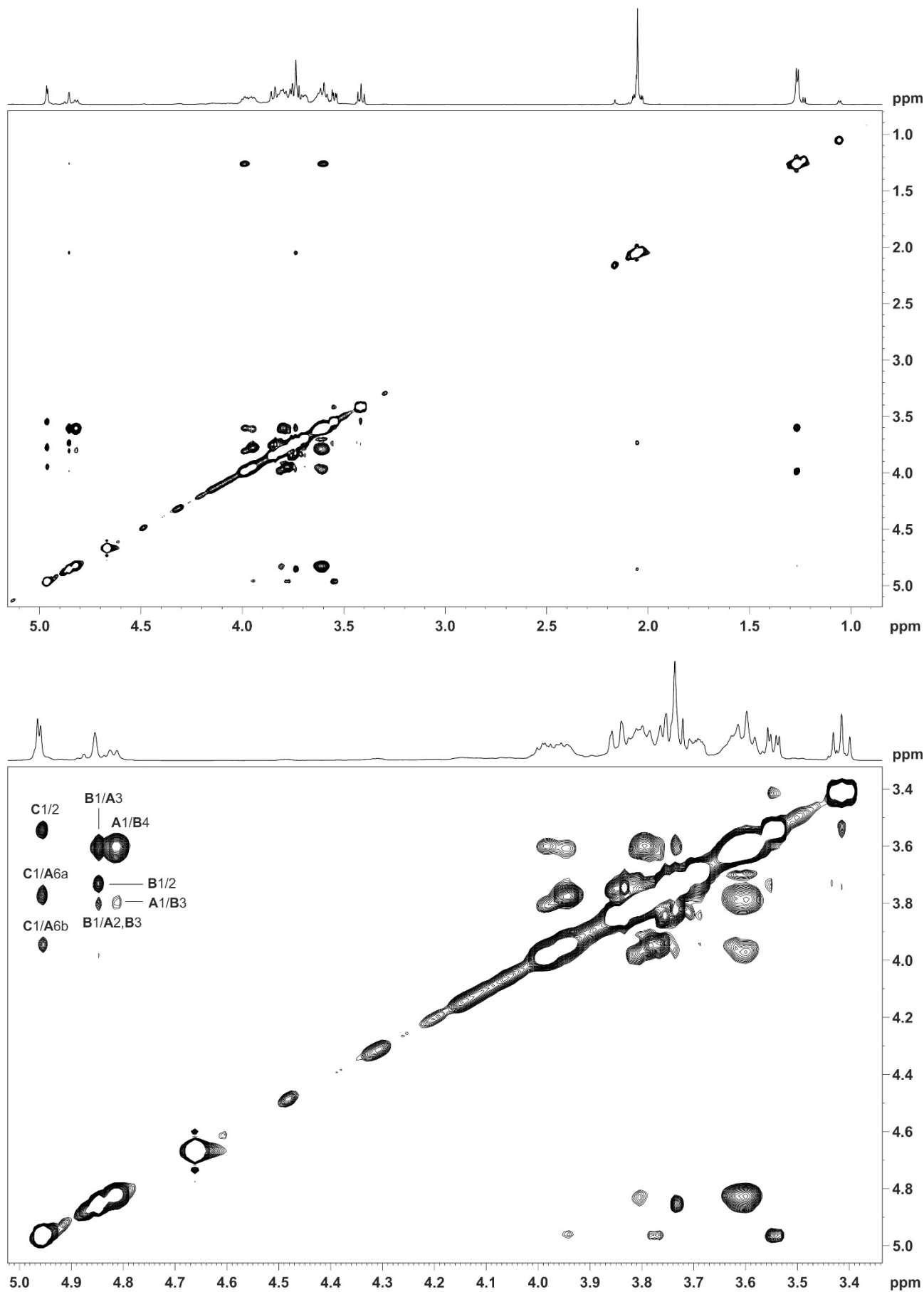


Figure S3. Full (top) and expanded (bottom) ^1H , ^1H NOESY spectrum. Correlations between anomeric and ring protons are indicated. Sugar residues are designated as **A** (GlcNAc), **B** (Rha) and **C** (Glc).

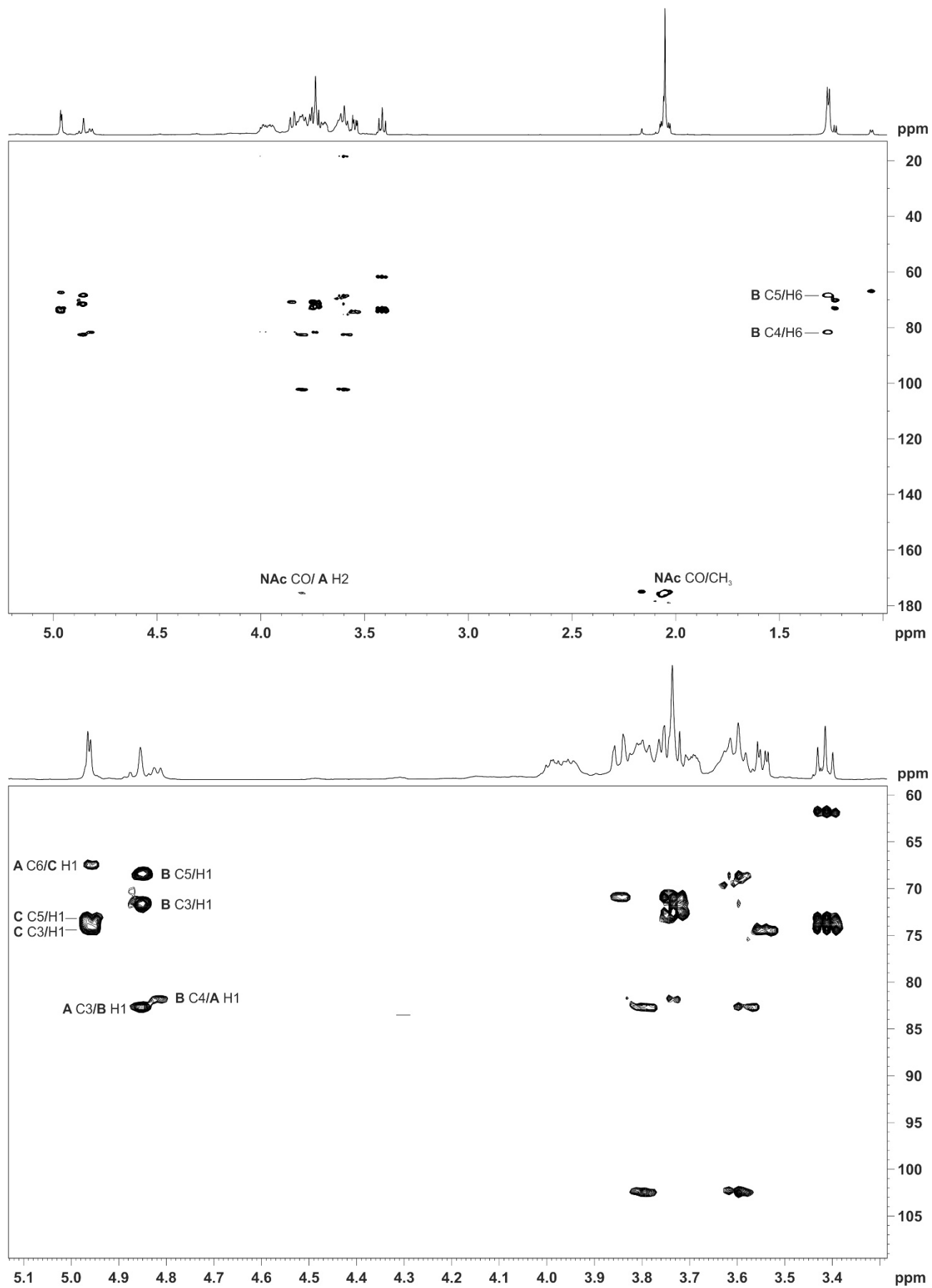


Figure S4. Full (top) and expanded (bottom) ^1H , ^{13}C HMBC spectrum. The characteristic C/H correlations are indicated. Sugar residues are designated as **A** (GlcNAc), **B** (Rha) and **C** (Glc).