Supplementary Material (ESI) for Organic & Biomolecular Chemistry

Supporting Information

Assessment of 6'- and 6'''-*N*-acylation of aminoglycosides as a strategy to overcome bacterial resistance

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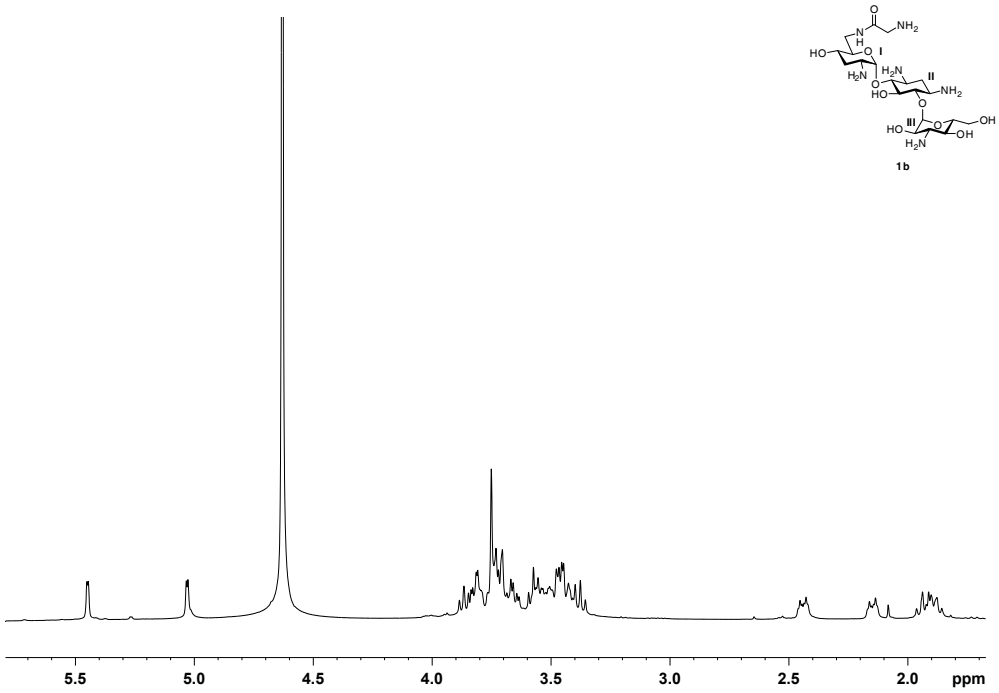

Fig. S1. ^{1}H NMR for the pseudo-trisaccharide **1b**.

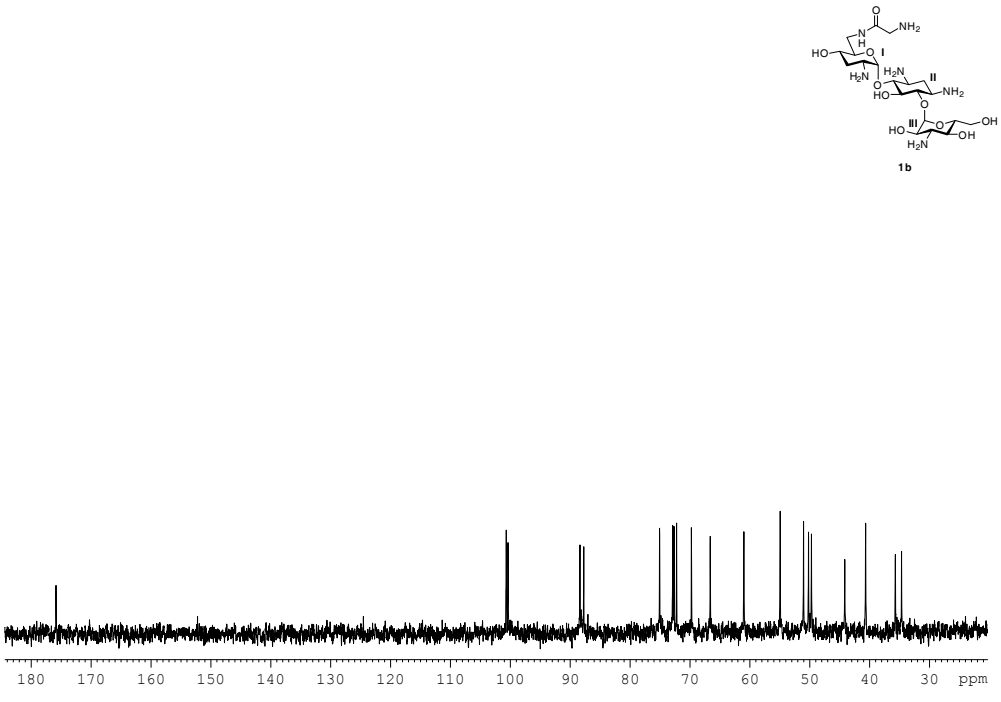

Fig. S2. ^{13}C NMR for the pseudo-trisaccharide **1b**.

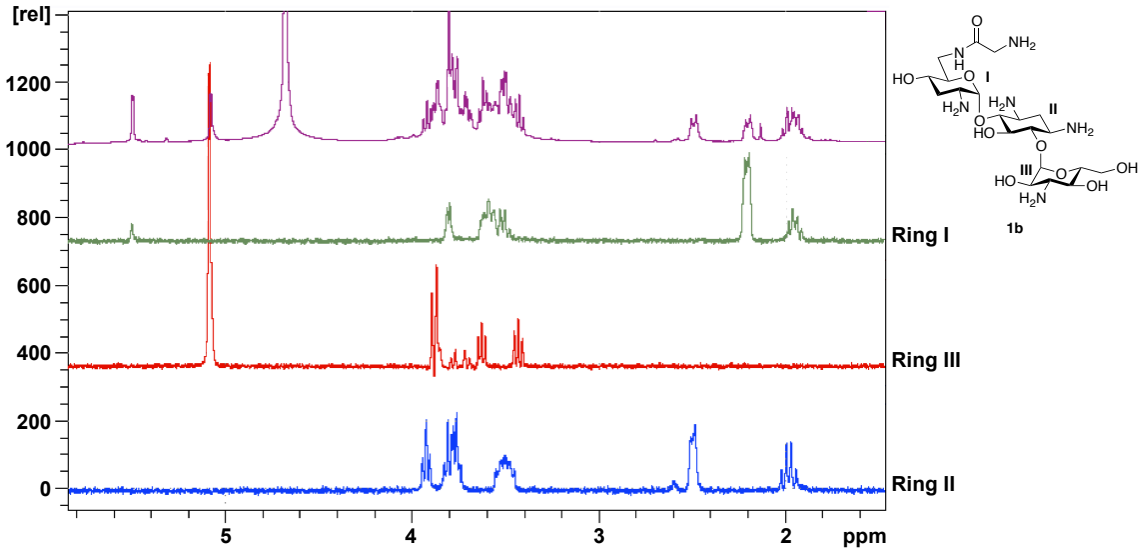

Fig. S3. 1D-TOCSY for the pseudo-trisaccharide **1b**.

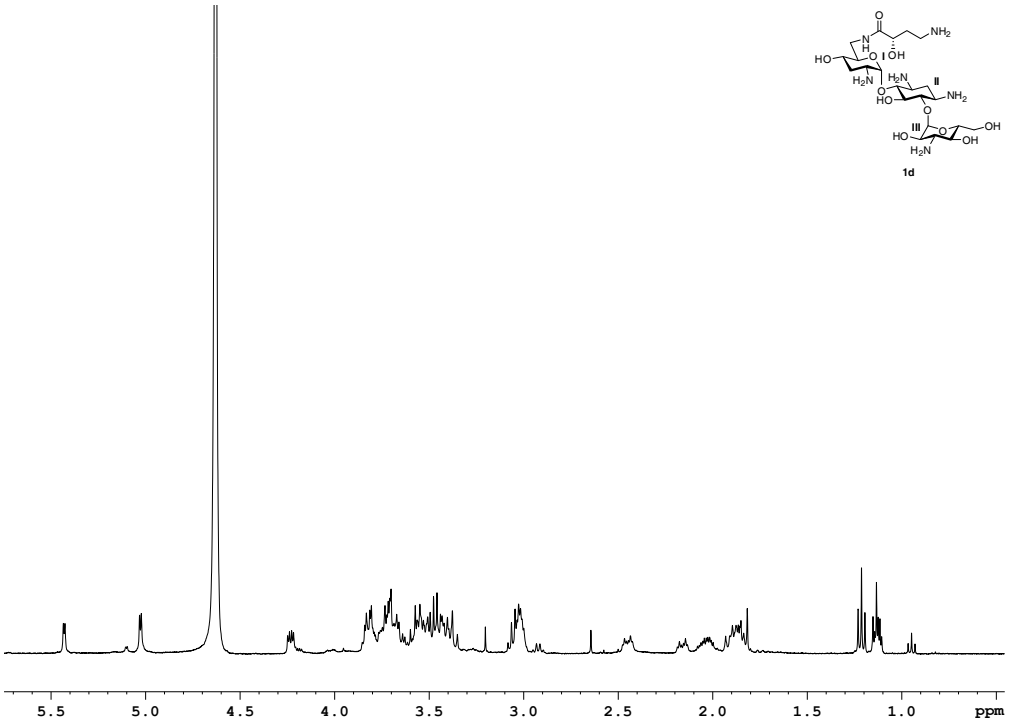

Fig. S4. ^{1}H NMR for the pseudo-trisaccharide **1d**.

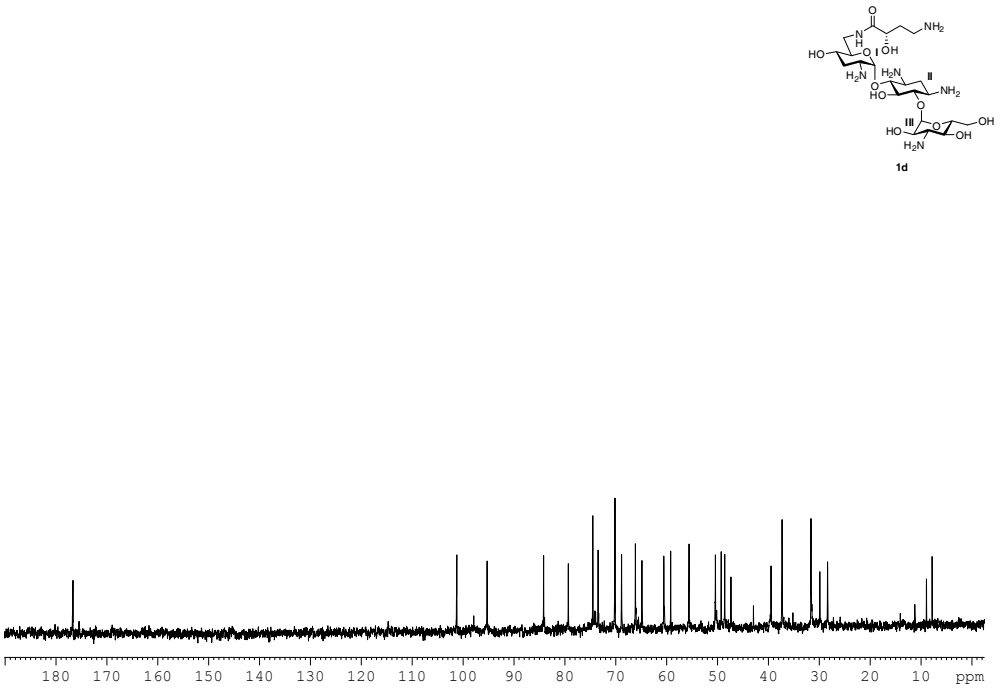

Fig. S5. ^{13}C NMR for the pseudo-trisaccharide **1d**.

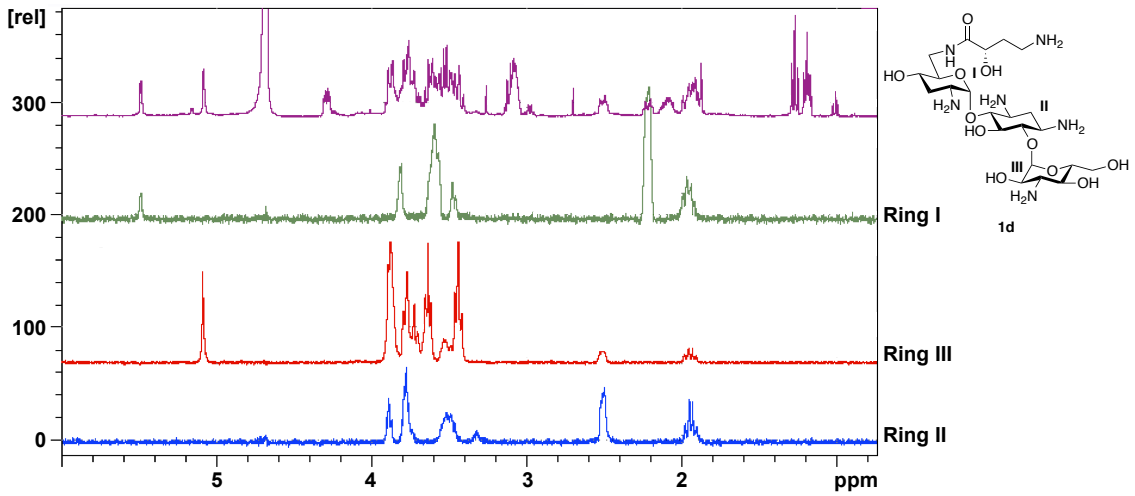

Fig. S6. 1D-TOCSY for the pseudo-trisaccharide **1d**.

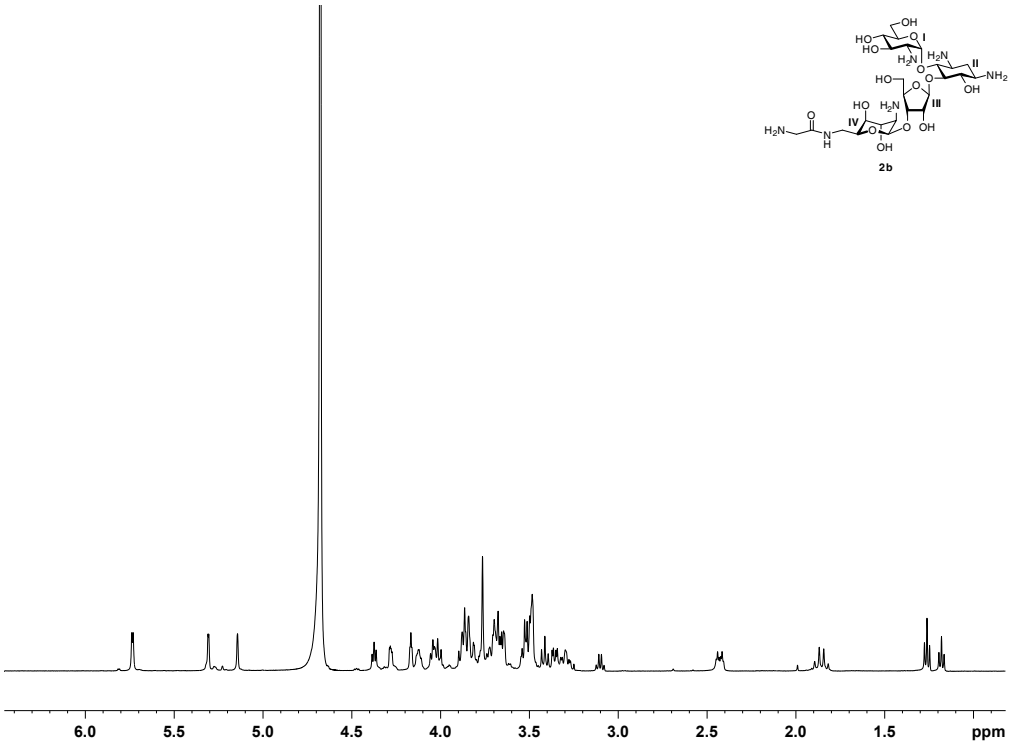

Fig. S7. ^{1}H NMR for the pseudo-tetrasaccharide **2b**.

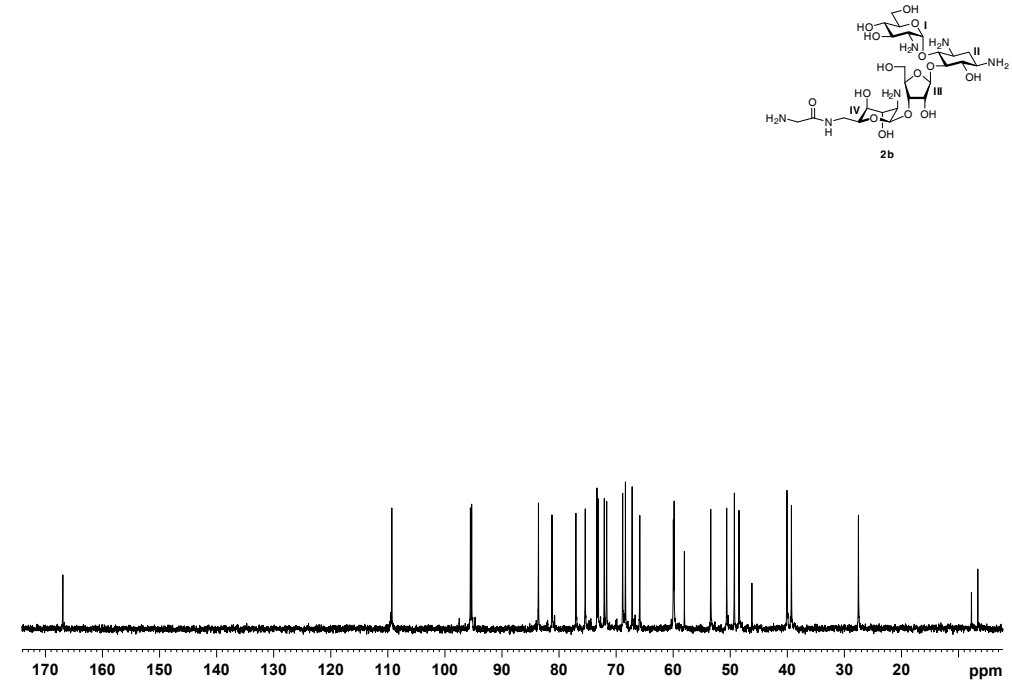

Fig. S8. ^{13}C NMR for the pseudo-tetrasaccharide **2b**.

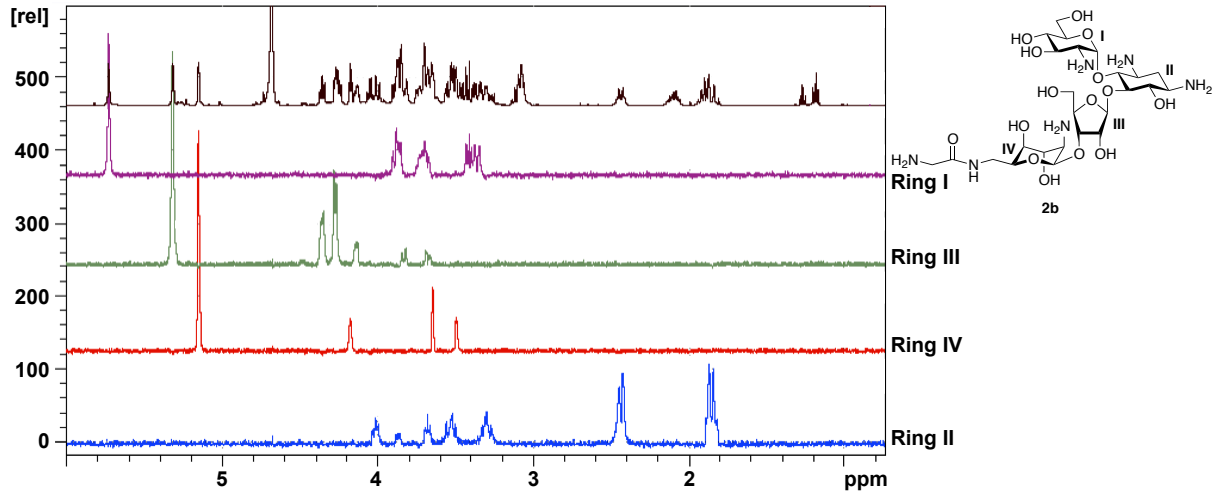

Fig. S9. 1D-TOCSY for the pseudo-trisaccharide **2b**.

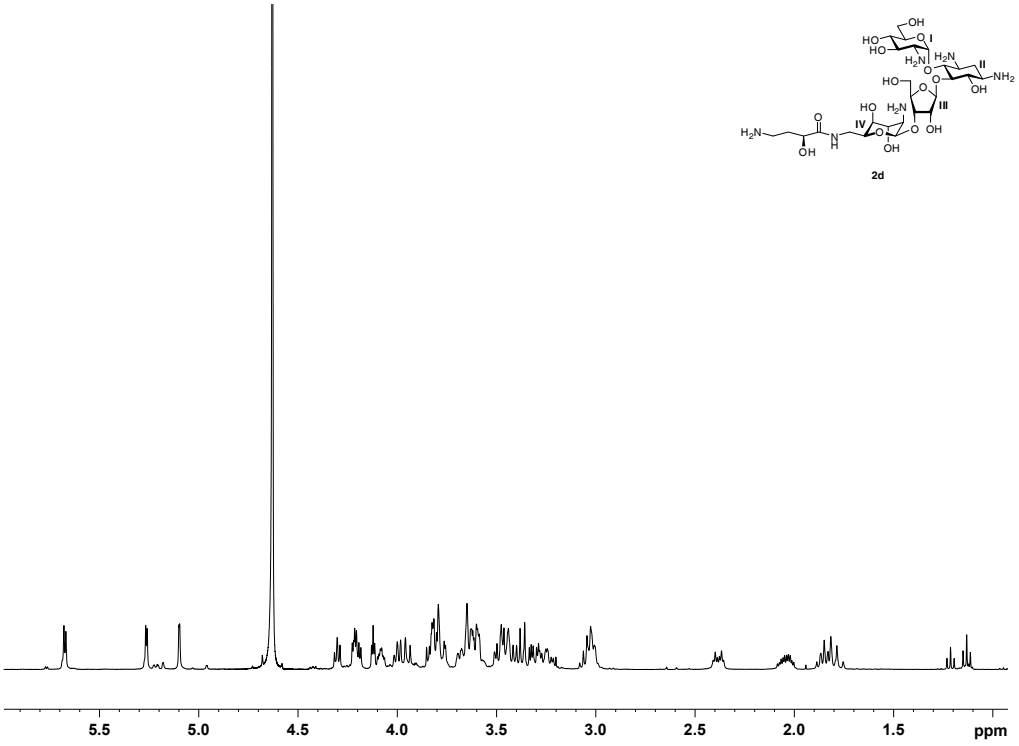

Fig. S10. ^{1}H NMR for the pseudo-tetrasaccharide **2d**.

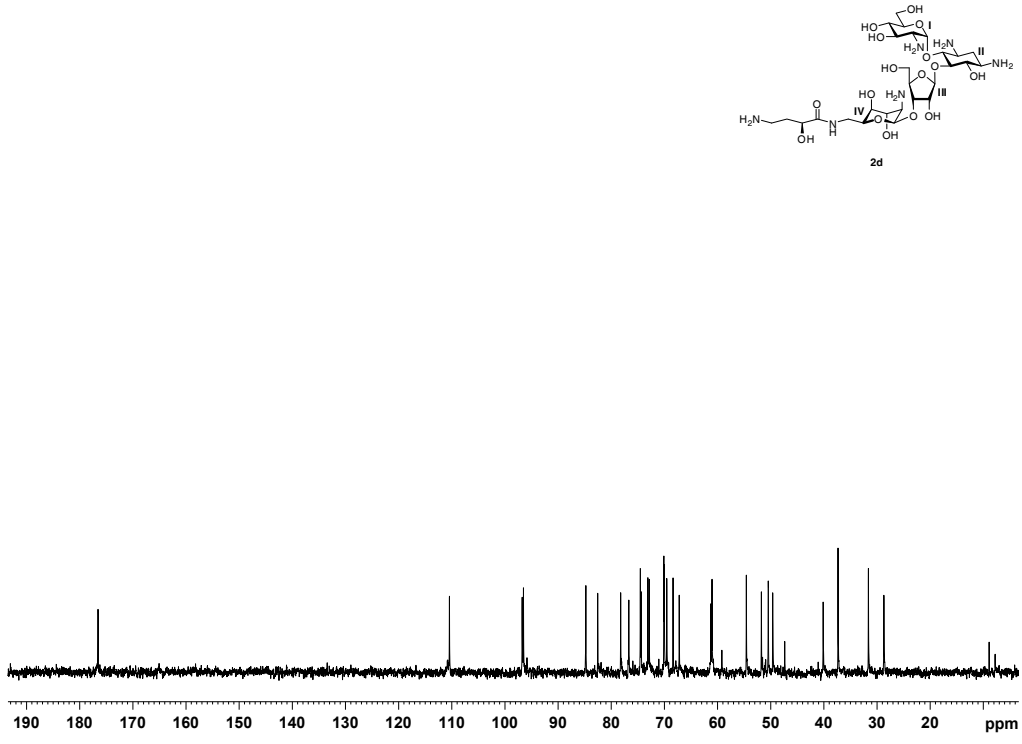

Fig. S11. ^{13}C NMR for the pseudo-tetrasaccharide **2d**.

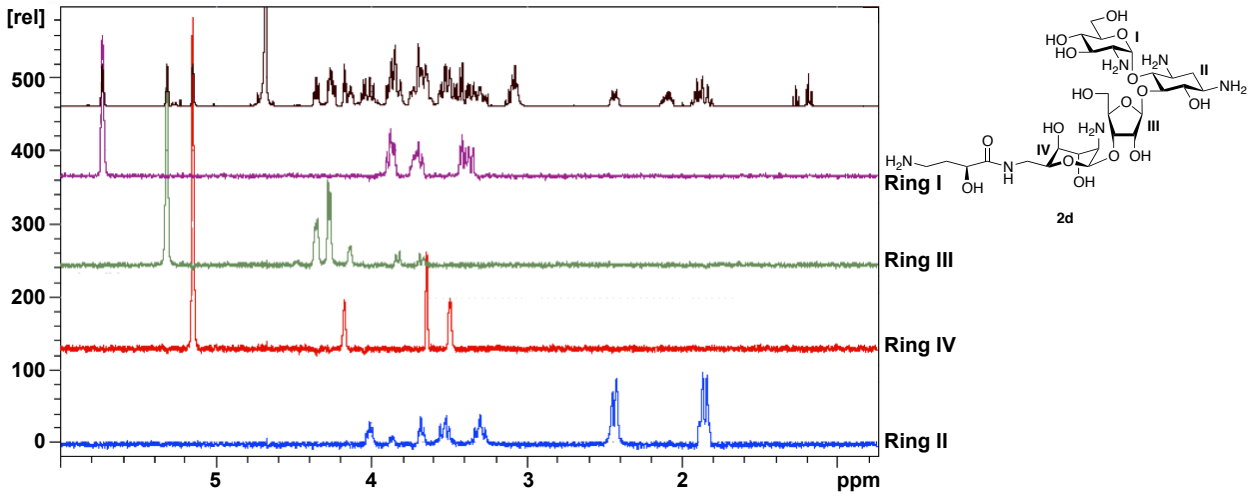

Fig. S12. 1D-TOCSY for the pseudo-trisaccharide **2d**.

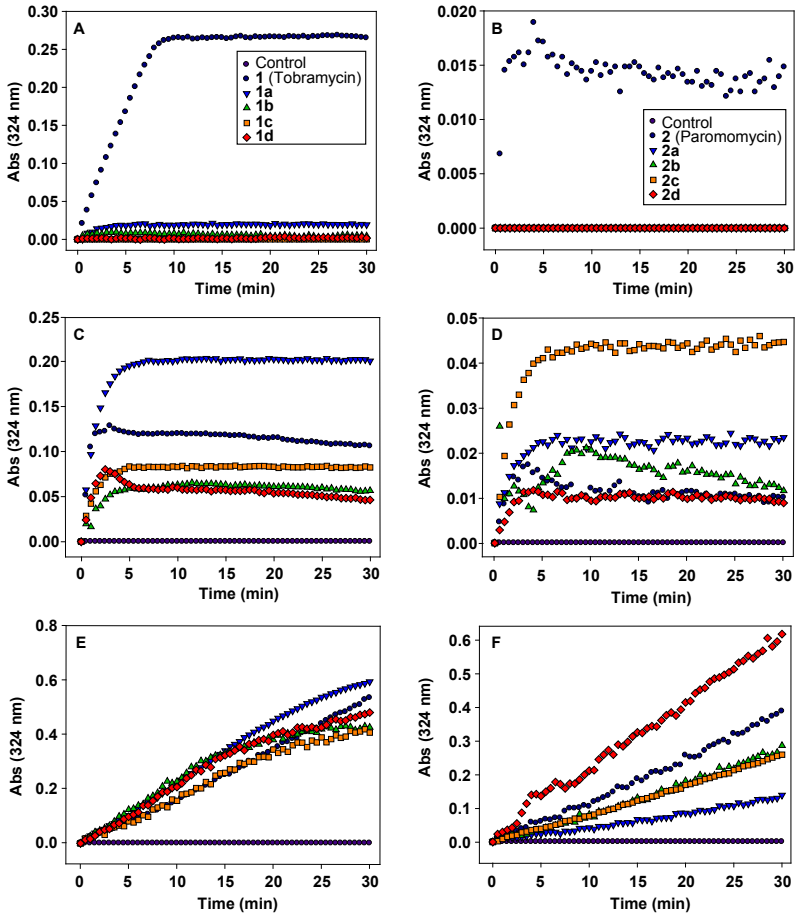

Fig. S13. Spectrophotometric assay plots monitoring the acetylation reaction of aminoglycosides with acetyl-CoA using AAC(6') (**A,B**) and AAC(3)-IV (**C,D**). Spectrophotometric assay plots monitoring the phosphorylation reaction of aminoglyosides with GTP using APH(2") (**E,F**). Plots **A**, **C**, and **E** show reactions of the parent drug tobramycin (**1**) and its derivatives **1a-1d** with legend in panel **A**. Plots **B**, **E**, and **F** show reactions of the parent drug paromomycin (**2**) and its derivatives **2a-2d** with legend in panel **B**. The controls and parent compounds are represented by purple and blue circles, respectively. The different modifications are represented as follow: **a** (azidoacetyl) = blue inverted triangle, **b** (glycinyl) = green triangle, **c** (CbzAHB) = orange square, and **d** (AHB) = red diamond.