

The remaining 97.5% of the worm pellets after biosorting were bead homogenized with 80% methanol/20% water using a FastPrep-24 (MP Biomedicals) for 5 cycles of 60 sec. The tubes were then centrifuged at high speed for 20 min to separate the supernatant from the beads. This process was repeated twice, and the supernatants were combined. The supernatant was then placed in a Labconco SpeedVac until no liquid was observed in the sample. The dried supernatant was then stored at -80 °C until NMR analysis. The pellets with beads were frozen at -80 °C until glycomics analysis.

Early larval stage animals are considerably smaller than adults and contribute much less mass per worm. Therefore, the supernatants of the 7 L1 replicates (first time point) were combined into one sample for the NMR analysis. This resulted in 29 dried extracted-worm pellets, which were dissolved in 600 μ L NMR buffer (0.1 M sodium phosphate buffer in D₂O with a final concentration of 0.33 mM of DSS) and mixed well using a vortex mixer. 590 μ L of each sample were added to 5 mm NMR tubes.