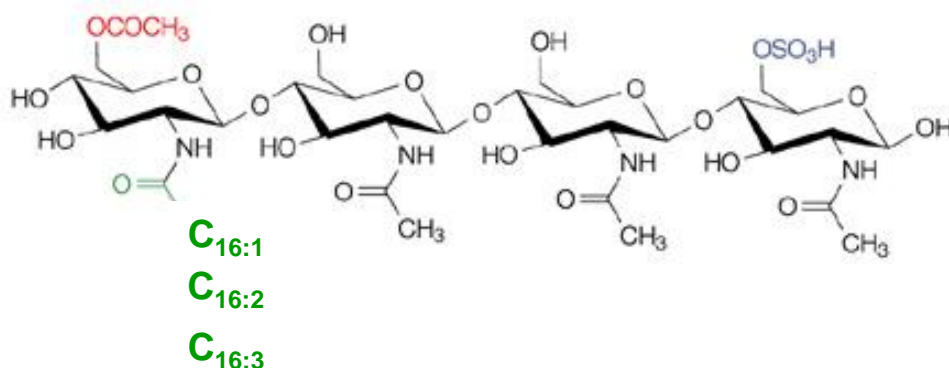
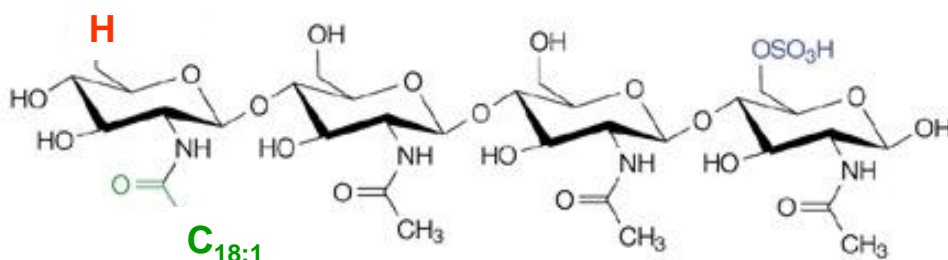


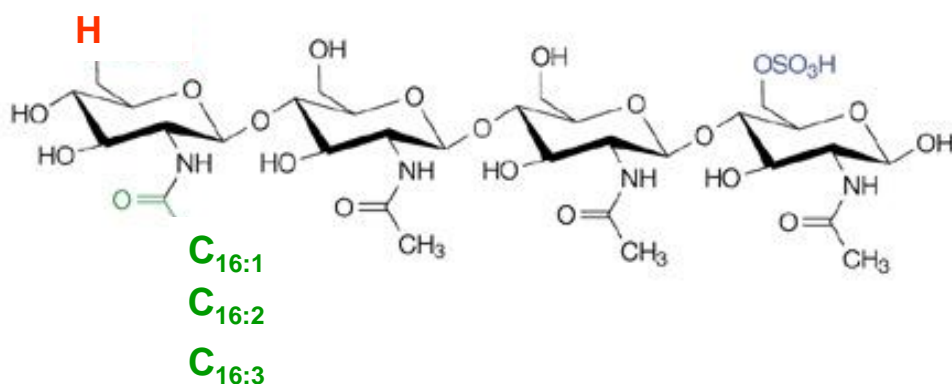
(a) Wild type Nod factor



(b) *nodF/nodL* Nod factor



(c) *nodL* Nod factor



**Supporting Information Fig. S1** Structures of Nod factors made by WT, *nodF/nodL* or *nodL* or mutants of *S. meliloti*

The WT Nod factors (a) are oligomers of 4 or 5 (not shown)  $\beta$ -1-4-linked N-acetylglucosamines carrying O-linked acetyl (red) and sulfate (blue) groups and  $\text{C}_{16:1}$ ,  $\text{C}_{16:2}$  or  $\text{C}_{16:3}$  N-linked acyl groups (green). Mutation of *nodL* (b and c) blocks attachment of the acetyl group and mutation of *nodF* (b) results in Nod factors carrying a  $\text{C}_{18:1}$  (rather than  $\text{C}_{16:1}$ ,  $\text{C}_{16:2}$  or  $\text{C}_{16:3}$ ) linked acyl group (green)