

## Dendrogram of cgMLST analysis (based on 216 loci)

Akkermansia muciniphila MmAkk1 (GCA\_030848245.1)  
Akkermansia muciniphila Akk0500a (GCA\_018847575.1)  
Akkermansia muciniphila SRR13827503\_bin.9\_metawrap\_v1.3\_MAG (GCA\_947101715.1)  
Akkermansia muciniphila SRR19981118\_bin.28\_metawrap\_v1.3\_MAG (GCA\_947429515.1)  
Akkermansia muciniphila SRR13428090\_bin.6\_metawrap\_v1.3\_MAG (GCA\_947652825.1)  
**Akkermansia muciniphila MGBC129691 (GCA\_948473895.1)**  
Akkermansia muciniphila MGBC165135 (GCA\_948475725.1)  
Akkermansia muciniphila MGBC131717 (GCA\_948480765.1)  
Akkermansia muciniphila MGBC131745 (GCA\_948491295.1)  
Akkermansia muciniphila MGBC131673 (GCA\_948496885.1)  
Akkermansia muciniphila MGBC164128 (GCA\_948512925.1)  
Akkermansia muciniphila MGBC163075 (GCA\_948519245.1)  
Akkermansia muciniphila MGBC131684 (GCA\_948545305.1)  
Akkermansia muciniphila MGBC130731 (GCA\_948551745.1)  
Akkermansia muciniphila MGBC164946 (GCA\_948557055.1)  
Akkermansia muciniphila MGBC129634 (GCA\_948565865.1)  
Akkermansia muciniphila MGBC130772 (GCA\_948567355.1)  
Akkermansia muciniphila MGBC163114 (GCA\_948572065.1)  
Akkermansia muciniphila MGBC165028 (GCA\_948593975.1)  
Akkermansia muciniphila MGBC163944 (GCA\_948602855.1)

0.001  
-0.001