Tree scale: 1

ID	Species	Structure
CAI32797.1	S. pneumoniae	-4)bDGlcp(1-4)[Ac(1-2]aL6dTalpN(1-2)bDGlcpA(1-3),Ac(1-2)]bD6dxylHexpN-4-ulo(1-
CAI34269.1	S. pneumoniae	-3)bDGalf(1-3)aDGlcp(1-2)[50%Ac(1-6)]bDGalf(1-3)aDGalp(1-2)xDRib-ol(5-P-
CAI33515.1	S. pneumoniae	-3)bLRhap(1-4)bDGlcp(1-3)aDGalp(1-3)[bDGalp(1-4),Ac(1-2)]bLRhap(1-4)aLRhap(1-2)xDAra-ol(1-P-
CAI33491.1	S. pneumoniae	-3)bDGlcp(1-3)aDGalp(1-3)[bDGalp(1-4),Ac(1-2)]bLRhap(1-4)aLRhap(1-4)bDGlcpA(1-3)[aDGlcp(1-2)]bDGalf(1-
CAI34407.1	S. pneumoniae	
CAI33966.2	S. pneumoniae	
CAI33983.1	S. pneumoniae	
AHB32861.1	A. baumanii	
AHB32215.1	A. baumanii	-3)[aDGalp(1-6),Ac(1-2)]aDGlcpN(1-3)[Ac(1-2)]bDGalpN(1-
AHB32799.1	A. baumanii	
CAI32973.1	S. pneumoniae	-4)aDGlcp(1-4)aDGlcpA(1-3)aDGalp(1-3)[Ac(1-2)]bDManpN(1-4)bDGlcp(1-
CAI33029.1	S. pneumoniae	-4)[4%Ac(1-3),3%Ac(1-2)]aDGlcp(1-4)[25%Ac(1-3),17%Ac(1-2)]aDGlcpA(1-3)aDGalp(1-3)[55%Ac(1-6),6%Ac(1-4),Ac(1-2)]bDManpN(1-4)bDGlcp(1-
CAI32993.1	S. pneumoniae	-4)[Ac(1-2)]aDGlcpN(1-4)aDGlcpA(1-3)aDGalp(1-3)[Ac(1-2)]bDManpN(1-4)bDGlcp(1-
CAI33011.1	S. pneumoniae	-4)aDGlcpA(1-3)aDGlcp(1-3)[Ac(1-2)]bDManpN(1-4)bDGlcp(1-4)[Ac(1-2)]aDGlcpN(1-
CAI33817.1	S. pneumoniae	
AHB32832.1	A. baumanii	
CAI33745.1	S. pneumoniae	
CAI33890.1	S. pneumoniae	
CAI33915.1	S. pneumoniae	
CAI33941.1	S. pneumoniae	
AHB32386.1	A. baumanii	-4)bDGlcp(1-4)[x?Gro(2-P-3)]bDGalp(1-4)bLRhap(1-
CAI33840.1	S. pneumoniae	-4)bDGlcp(1-4)[x?Gro(2-P-3),aLRhap(1-2)]bDGalp(1-4)bLRhap(1-
CAI33862.1	S. pneumoniae	
CAI34032.1	S. pneumoniae	
CAI34057.2	S. pneumoniae	
AHB32311.1	A. baumanii	-4)bDGlcp(1-3)[aDGlcpA(1-6)aDGlcp(1-2)]aLRhap(1-3)aLRhap(1-3)bLRhap(1-
CAI32727.1	S. pneumoniae	-3)bDGalp(1-4)bDGlcp(1-6)[x?Rib-ol(1-P-4),Ac(1-3),Ac(1-2)]aDGlcpN(1-4)aDGalp(1-
CAI33149.1	S. pneumoniae	-3)bDGalp(1-4)bDGlcp(1-6)[x?Gro(1-P-4),Ac(1-3),Ac(1-2)]aDGlcpN(1-4)aDGalp(1-
CAI33169.1	S. pneumoniae	-3)bDGalp(1-4)bDGlcp(1-6)[50%Ac(1-3)x?Rib-ol(1-P-4),Ac(1-2)]aDGlcpN(1-4)[Ac(1-2)]aDGalp(1-
CAI33207.1	S. pneumoniae	"-3)bDGalp(1-4)aDGlcp(1-6)[x?Gro(1-P-4),<<Ac(1-3)]Ac(1-2)>>]aDGlcp(1-4)aDGalp(1-"
CAI33128.1	S. pneumoniae	-6)[x?Gro(1-P-4),Ac(1-2)]aDGlcpN(1-4)aDGalp(1-3)bDGalp(1-4)bDGlcp(1-
CAI33188.1	S. pneumoniae	
CAI32823.1	S. pneumoniae	-2)aDGalp(1-3)aDGlcp(1-3)aLRhap(1-3)xDRib-ol-3-P-
CAI32843.1	S. pneumoniae	-2)aDGalp(1-3)aDGlcp(1-3)aLRhap(1-4)xDRib-ol(5-P-
CAI33631.1	S. pneumoniae	-4)[Ac(1-2)]bDManpN(1-4)aDGlcp(1-3)aLRhap(1-P-
CAI33700.1	S. pneumoniae	-4)[Ac(1-2)]bDManpN(1-4)aDGlcp(1-2)aLRhap(1-P-
AHB32687.1	A. baumanii	
CAI32705.1	S. pneumoniae	-3)[Ac(1-2)]aDFucpN4N(1-4)aDGalpA(1-3)aDGalpA(1-
AHB32462.1	A. baumanii	
CAI33798.1	S. pneumoniae	-4)bDGlcpA(1-4)[aDGlcp(1-3),Ac(1-2)]bLRhap(1-4)aDGalpN(1-3)aDGalf(1-2)aLRhap(1-
AKA20948.1	Y. pseudotuberculosis	-2)aDManp(1-3)[bXParp(1-4)]aLFucp(1-3)[Ac(1-2)]aDGalpN(1-
ACV52983.1	Y. pseudotuberculosis	-2)[aL6dAltf(1-3)]bDManp(1-4)aDManp(1-3)aLFucp(1-3)[Ac(1-2)]aDGlcpN(1-
CAB63298.1	Y. pseudotuberculosis	
ACV53000.1	Y. pseudotuberculosis	
AHB32438.2	A. baumanii	-3)[aDGalp(1-6)bDGlcp(1-3)[Ac(1-2)]bDGalpN(1-
AHB32774.1	A. baumanii	-3)[bDQuip3N(1-6)[Ac(1-2)]aDGlcpN(1-4),Ac(1-2)]bDGalpN(1-3)aDGalp(1-3)[Ac(1-2)]bDGlcpN(1-
CAI33537.1	S. pneumoniae	-4)bDGlcp(1-4)[xDGro(1-P-3),aDGlcp(1-2)]bDGalp(1-4)[Ac(1-2)]aDGlcpN(1-3)bLRhap(1-
CAI33610.1	S. pneumoniae	-4)bDGlcp(1-4)[x?Gro(1-P-3),Ac(1-6)aDGlcp(1-2)]bDGalp(1-4)aDGlcp(1-3)[Ac(1-2)]bLRhap(1-
CAI33561.1	S. pneumoniae	-4)bDGlcp(1-4)[xDGro(1-P-3),aDGlcp(1-2)]bDGalp(1-4)aDGlcp(1-3)bLRhap(1-
CAI33585.1	S. pneumoniae	-4)bDGlcp(1-4)[xDGro(1-P-3),aDGlcp(1-2)]bDGalp(1-4)aDGlcp(1-3)aLRhap(1-
AHB32510.1	A. baumanii	-4)[bDGlcp(1-6),Ac(1-2)]bDGalpN(1-3)aDGalp(1-6)bDGalp(1-3)[Ac(1-2)]aDGalpN(1-
AHB32637.1	A. baumanii	-6)[Ac(1-2)]aDGlcpN(1-4)[bDGlcp(1-3),Ac(1-2)]aDGalpN(1-3)[Ac(1-2)]aDGlcpN(1-
AHB32715.1	A. baumanii	-6)[Ac(1-2)]aDGlcpN(1-4)[bDGlcp(1-3),Ac(1-2)]aDGalpN(1-3)[Ac(1-2)]aDGlcpN(1-
CAI33226.1	S. pneumoniae	-4)[aDGalp(1-3),Ac(1-2)]aLFucpN(1-3)[Ac(1-2)]bDGalpN(1-4)[aDGlcp(1-2)aDGlcp(1-3),Ac(1-2)]bDManpNA(1-
CAI34613.1	S. pneumoniae	
CAI33252.1	S. pneumoniae	
CAI33278.1	S. pneumoniae	-4)[aDGalp(1-3),Ac(1-2)]aLFucpN(1-3)[Ac(1-2)]bDGalpN(1-4)[aDGlcp(1-2)aDGlcp(1-3),Ac(1-2)]bDManpNA(1-
CAI34753.1	S. pneumoniae	
AHB32538.1	A. baumanii	-4)[bDFucp3N(1-3)[Ac(1-2)]aDGalpN(1-3)[Ac(1-2)]bDGalpN(1-3)]aDGalp(1-6)bDGalp(1-3)[Ac(1-2)]bDGalpN(1-
ADI59429.1	Y. pseudotuberculosis	-2)[bXParf(1-3)]aDManp(1-3)aLFucp(1-3)[Ac(1-2)]bDGalpN(1-
ADI59445.1	Y. pseudotuberculosis	-2)[aXAbep(1-3)]aDManp(1-3)aLFucp(1-3)[Ac(1-2)]bDGalpN(1-
CAI34099.1	S. pneumoniae	-2)bLRhap(1-3)bDGalf(1-3)bLRhap(1-4)bDGlcpA(1-3)bDGalf(1-
CAI34475.1	S. pneumoniae	
CAI34498.1	S. pneumoniae	
AEP25477.1	Y. pseudotuberculosis	-6)[aXColp(1-3)]bDGlcpN(1-3)[Ac(1-2)]aDGalpN(1-3)[aDGlcp(1-6),Ac(1-2)]bDGalpN(1-
CAI34680.1	S. pneumoniae	
CAI34124.1	S. pneumoniae	-4)bDGlcp(1-3)[Ac(1-4),aLRhap(1-P-2)aDGlcp(1-4)[P-3),Ac(1-2)]bLRhap(1-
CAI34150.1	S. pneumoniae	-4)bDGlcp(1-3)[aLRhap(1-P-2)aDGlcp(1-4)[P-3),Ac(1-2)]bLRhap(1-
AHB32586.1	A. baumanii	-4)[Ac(1-7),Ac(1-5)]bXLegp(2-6)[Ac(1-2)]aDGlcpN(1-3)[Ac(1-2)]aLFucpN(1-3)[Ac(1-2)]aDGlcpN(1-
CAI33652.1	S. pneumoniae	-4)[Ac(1-2)]bDManpN(1-4)bDGlcp(1-4)[bDRibf(1-4)aLRhap(1-3),Ac(1-2)]bDManpN(1-4)aLRhap(1-P-
CAI33675.1	S. pneumoniae	-4)[Ac(1-2)]bDManpN(1-4)bDGlcp(1-4)[bDGlcp(1-6),bDRibf(1-4)aLRhap(1-3),Ac(1-2)]bDManpN(1-4)aLRhap(1-P-
CAI34388.1	S. pneumoniae	
CAI34177.1	S. pneumoniae	
CAI34254.1	S. pneumoniae	-3)bDGalp(1-3)[aDGalp(1-2)]aDGalp(1-3)[40%Ac(1-2)]bDGalf(1-3)bDGlcp(1-5)bDGalf(1-
CAI34217.1	S. pneumoniae	
CAI34198.1	S. pneumoniae	-6)bDGlcp(1-5)bDGalf(1-3)[Ac(1-2)]bDGalpN(1-4)[aDGalp(1-2)]aDGalp(1-2)xDRib-ol(5-P-
CAI34236.1	S. pneumoniae	
AKA20999.1	Y. pseudotuberculosis	-2)[aLAltf(1-3)]aLFucp(1-3)aDManp(1-4)aLFucp(1-3)[Ac(1-2)]aDGalpN(1-
CAX18360.1	Y. pseudotuberculosis	-2)[bXParf(1-3)]aLFucp(1-3)aDManp(1-4)aLFucp(1-3)[Ac(1-2)]aDGalpN(1-
AKA20981.1	Y. pseudotuberculosis	-2)[aXAsc?(1-3)]aLFucp(1-3)aDManp(1-4)aLFucp(1-3)[Ac(1-2)]aDGalpN(1-
AKL88154.1	Y. pseudotuberculosis	
AKA20935.1	Y. pseudotuberculosis	-6)[aXAbep(1-3)]aDManp(1-2)aDManp(1-2)bDManp(1-3)[Ac(1-2)]aDGalpN(1-
AKA20966.1	Y. pseudotuberculosis	-6)[aXTyvp(1-2)]aDManp(1-2)aDManp(1-2)bDManp(1-3)[Ac(1-2)]aDGalpN(1-
AEP25500.1	Y. pseudotuberculosis	-3)[Ac(1-2)]bDGlcpN(1-6)[aXColp(1-2)bXYerp(1-3),Ac(1-2)]aDGalpN(1-3)[Ac(1-2)]bDGalpN(1- // Yer = 3,6-dideoxy-4-C-[(S)-1-hydroxyethyl]-D-xylo-hexose (yersiniose A)
CDF66396.1	Y. pseudotuberculosis	-4)[Ac(1-3),Ac(1-2)]bDGlcpNA(1-4)[aDGalp(1-3),Am(1-2)]aLFucpN(1-3)[Ac(1-2)]aDGlcpN(1-
CAI33718.1	S. pneumoniae	-6)aDGlcp(1-6)bDGlcp(1-3)bDGalf(1-3)bDGlcp(1-3)[bDGalf(1-4),Ac(1-2)]aDGlcpN(1-P-
CAI34436.1	S. pneumoniae	
CAI33084.1	S. pneumoniae	-5)bDGalf(1-3)bDGalp(1-4)[bDGalf(1-6),Ac(1-2)]bDGalpN(1-3)aDGalp(1-2)xDRib-ol(5-P-
CAI33105.1	S. pneumoniae	-4)[bDGalf(1-6),Ac(1-2)]bDGalpN(1-3)aDGalp(1-2)xDRib-ol(5-P-6)bDGalf(1-3)bDGlcp(1-
CAI33048.1	S. pneumoniae	-5)bDGalf(1-3)bDGalp(1-4)[bDGalp(1-6),bDGalf(1-3),Ac(1-2)]bDGalpN(1-3)aDGalp(1-2)xDRib-ol(5-P-
CAI34733.1	S. pneumoniae	-5)bDGalf(1-3)bDGalp(1-4)[bDGalf(1-3),Ac(1-2)]bDGalpN(1-3)aDGalp(1-4)xDRib-ol(5-P-
CAI32772.1	S. pneumoniae	
AHB32357.1	A. baumanii	
AHB32267.1	A. baumanii	
AHB32490.1	A. baumanii	
AHB32242.2	A. baumanii	-3)[Ac(1-2)aLFucpN(1-4),Ac(1-2)]aDGalpNA(1-3)[Ac(1-2)]aLFucpN(1-3)[Ac(1-2)]bDGlcpN(1-
AFV46136.1	Y. pseudotuberculosis	-3)[bXYerp(1-4)]aDGalp(1-4)aLQuip(1-3)[Ac(1-2)]bDGlcpN(1- // Yer = 3,6-dideoxy-4-C-[(S)-1-hydroxyethyl]-D-xylo-hexose (yersiniose A)
CAI34008.1	S. pneumoniae	-3)[Ac(1-2)]bDGlcpN(1-3)aDGalp(1-4)[P-2)]bLRhap(1-4)bDGlcp(1-
CAI34587.1	S. pneumoniae	-3)[aDGalp(1-6)]aDGalp(1-3)[Ac(1-2)(x?Glcp(1-P-6)]bDGlcpN(1-4),Ac(1-2)]aLFucpN(1-3)[Ac(1-2)]bDGalpN(1-2)aLRhap(1-
AHB32614.2	A. baumanii	
AHB32334.1	A. baumanii	-3)[Ac(1-2)bDManpN(1-4)aDGalp(1-4)]bDGalp(1-3)[Ac(1-2)]bDGalpN(1-
AHB32666.1	A. baumanii	
AHB32746.2	A. baumanii	-2)[bLRhap(1-4)[Ac(1-2)]bDGlcpN(1-3)]aLRhap(1-2)aLRhap(1-3)[Ac(1-2)]aDGlcpN(1-
AHB32888.2	A. baumanii	-2)[bLRhap(1-4)[Ac(1-2)]bDGlcpN(1-3)]aLRhap(1-2)aLRhap(1-3)aLRhap(1-3)[Ac(1-2)]aDGlcpN(1-
CAI33343.1	S. pneumoniae	-3)aDGalp(1-2)[70%x?Gro(2-P-3)]bDGalp(1-4)[Ac(1-2)]bDGlcpN(1-3)bDGalp(1-4)bDGlcp(1-
CAI33324.1	S. pneumoniae	-3)aDGalp(1-2)[P-3)]bDGalp(1-4)[Ac(1-2)]bDGlcpN(1-3)bDGalp(1-4)bDGlcp(1-
CAI33366.1	S. pneumoniae	-4)bDGlcp(1-6)[bDGalp(1-4),Ac(1-2)]bDGlcpN(1-3)bDGalp(1-
CAI33389.1	S. pneumoniae	-6)[%Ac(1-2)[%Ac(1-6),%Ac(1-4),%Ac(1-3)]aDGalp(1-2)[x?Gro(2-P-3)]bDGalp(1-4),Ac(1-2)]bDGlcpN(1-3)bDGalp(1-4)bDGlcp(1-
AAN23041.1	Y. pseudotuberculosis	-3)bDGalp(1-4)bDGlcp(1-6)[aDGalp(1-2)[x?Gro(2-P-3)]bDGalp(1-4),Ac(1-2)]bDGlcpN(1-
AAN23057.1	Y. pseudotuberculosis	-3)[aXTyvp(1-3)bD6dmanHepp(1-4)]aDGalp(1-3)[Ac(1-2)]bDGlcpN(1-
AAN23078.1	Y. pseudotuberculosis	-3)[aXAbep(1-3)bD6dmanHepp(1-4)]aDGalp(1-3)[Ac(1-2)]bDGlcpN(1-
ADX97403.1	Y. pseudotuberculosis	-4)[aXColp(1-6),aXColp(1-3)]aDGalp(1-4)aDGalp(1-3)[Ac(1-2)]bDGalpN(1-
CAI34369.1	S. pneumoniae	-4)bDGalp(1-4)[Ac(1-3),Ac(1-2)]bDGlcp(1-3)bDGalf(1-4)[Ac(1-2)]bDGlcpN(1-3)xDRib-ol(5-P-
CAI33309.1	S. pneumoniae	-3)bDGalf(1-3)aLRhap(1-2)aLRhap(1-3)[x?Gro(1-P-6)]aDGalp(1-3)bDGalp(1-4)bDGlcp(1-
CAI33441.1	S. pneumoniae	-4)bDGlcpA(1-4)bDGlcp(1-4)aDGlcp(1-4)aDGalp(1-
CAI32957.1	S. pneumoniae	
CAI34080.1	S. pneumoniae	-4)[Ac(1-2)]bDGalpN(1-6)bDGalf(1-3)bDGalp(1-6)bDGalf(1-1)xDRib-ol-5-P-
CAI34348.1	S. pneumoniae	
CAI34657.1	S. pneumoniae	
CAI34310.1	S. pneumoniae	-4)[Ac(1-2)]bDGalpN(1-6)bDGalf(1-3)bDGlcp(1-6)[70%Ac(1-2)]bDGalf(1-1)xDRib-ol(5-P-
CAI34286.1	S. pneumoniae	-3)bDGalp(1-3)[Ac(1-6),Ac(1-5)]bDGalf(1-3)bDGlcp(1-6)[Ac(1-2)]bDGalf(1-1)xDMan-ol(6-P-
CAI34328.1	S. pneumoniae	
CAI34519.1	S. pneumoniae	
CAI34544.1	S. pneumoniae	
CAI34641.1	S. pneumoniae	
AHB32283.1	A. baumanii	
CAI33466.1	S. pneumoniae	-3)[x?Gro(1-P-4)]aLRhap(1-3)[x?Gro(1-P-6)]aDGlcp(1-3)[Ac(1-2)]bLRhap(1-4)bDGlcp(1-
CAI32867.1	S. pneumoniae	-6)bDGalp(1-3)[Ac(1-2)]bLRhap(1-4)bDGlcp(1-3)[Ac(1-2)aDGlcpN(1-2)aLRhap(1-4),Ac(1-2)]bDGalpN(1-
CAI32935.1	S. pneumoniae	-6)[bDGalp(1-2)]aDGalp(1-3)[Ac(1-2)]bLRhap(1-4)bDGlcp(1-3)[Ac(1-2)aDGlcpN(1-2)aLRhap(1-4),Ac(1-2)]bDGalpN(1-
AHB32563.2	A. baumanii	
AHB32411.1	A. baumanii	-2)[Ac(1-2)aDManpN(1-3)]aLRhap(1-2)aLRhap(1-3)aLRhap(1-3)[Ac(1-2)]aDGlcpN(1-
CAI33919.1	S. pneumoniae	
CAI33945.1	S. pneumoniae	
CAI34454.1	S. pneumoniae	
CAI32889.1	S. pneumoniae	-6)[Ac(1-2)]aDGlcpN(1-2)aLRhap(1-2)bLRhap(1-4)bDGlcp(1-4)[bDRibf(1-4)aLRhap(1-3)]aDGlcp(1-P-
CAI32910.1	S. pneumoniae	-6)[Ac(1-2)]aDGlcpN(1-2)aLRhap(1-2)bLRhap(1-4)bDGlcp(1-4)[bDRibf(1-4)aLRhap(1-3),Ac(1-2)]aDGalpN(1-P-