Table S1. Blast-based assignments of gene origins

Category	Name	Color in Figure 4	Criteria	Total genes	Chromo-some	Mega-plasmid
DSM1360-specific	1	red				
Genes unique to DSM13060	1a	dark red	m=0,r=0,a=0,n=0 AND e=0 AND am1=0	510	394	116
Potential transfer from non-*Alphaprotebacteria* to DSM13060	1b	intermediate red	m=0,r=0,a=0,n>0 AND e=0 AND am1=0 m=0,n>r,n>a AND e=0 AND am1=0	71	59	12
Potential transfer from non-*Rhizobiales Alphaproteobacteria* to DSM13060	1c	light red	m=0,r=0,a>0,n>0 AND e=0 AND am1=0	33	26	7
***M. extorquens*-specific**	2	purple				
Genes unique to DSM13060/AM1	2a	dark purple	m=0,r=0,a=0,n=0 AND am1>=1	731	284	447
Genes unique to *extorquens*, not shared with AM1	2b	purple	m=0,r=0,a=0,n=0 AND e>0 AND am1 =0	80	57	23
Potential transfer from non-*Alphaprotebacteria* to DSM13060/AM1	2c	intermediate purple	m=0,r=0,a=0,n>0 AND am1>=0 m=0,n>r,n>a AND am1>=0	294	153	141
Potential transfer from non-*Alphaprotebacteria* to *extorquens,* not shared with AM1	2d	light purple	m=0,r=0,a=0,n>0 AND e>0 AND am1=0 m=0,n>r,n>a AND e>0 AND am1=0	29	25	4
***Methylobacterium*-specific**	3	blue				
Genes unique to *Methylobacterium* shared with AM1	3a	dark blue	m>0,r=0,a=0,n=0 AND am1 >=1	978	926	52
Genes unique to *Methylobacterium,* not shared with AM1	3b	blue	m>0,r=0,a=0,n=0 AND am1 =0 AND e>0	62	44	18
Potential transfer form non-*Alphaproteobacteria* to *Methylobacterium,* shared with AM1	3c	intermediate blue	m>0,r=0,a=0,n>0 AND am1>=1 m>0, n>r,n>a AND am1>=1	166	152	14

Potential transfer form non-*Alphaproteobacteria* to *Methylobacterium,* not shared with AM1	3d	light blue	m>0,r=0,a=0,n>0 AND am1=0 AND e>0 m>0, n>r,n>a AND am1=0 AND e>0	32	20	12
Alpha backbone		green				
Alpha backbone, shared with AM1		dark green	Remaining, am1>1	3034	2738	219
Alpha backbone, not shared with AM1		light green	Remaining, am1 = 0	625	484	123
HGT from non-Alphaproteobacteria to DSM1360 or a *Methylobacterium* ancestor, total			1b,2c-d, 3c-d	592	409	183