S1 Table. Key bacterial strains, plasmids and primers

Name	Description	Source or reference
Strains		
E. coli MG1655	WT K12 strain	*E. coli* Genetic Stock Center
E. coli LSR4	MG1655 *ΔnanA*, sialate lyase mutant	[1]
E. coli Top10	Cloning strain	Invitrogen
F. nucleatum nucleatum ATCC25586		ATCC
F. nucleatum nucleatum ATCC23726		ATCC
F. nucleatum nucleatum ATCC23726 Sm^R	Spontaneous streptomycin-resistant mutant of ATCC23726	This study
F. nucleatum nucleatum ATCC23726 Sm^R Ω*siaT*	ATCC23726 Sm^R with plasmid disruption in *siaT* , sialic acid transporter mutant	This study
F. nucleatum polymorphum ATCC10953		ATCC
F. nucleatum vincentii JMP2A		[2]
F. nucleatum animalis FQG51A		[2]
F. nucleatum polymorphum JMSY1		Isolate provided by Justin Merritt
F. nucleatum JMH52		Isolate provided by Justin Merritt
*F. mortiferum ATCC*25557		ATCC
F. peridonticum SYJL4		[2]

Leptotrichia spp. JM6		Isolate provided by Justin Merritt
L. hofstadii JM4		Isolate provided by Justin Merritt
G. vaginalis JCP8151B	Human vaginal isolate	[3]
Plasmids		
pUC19	*E. coli* cloning vector	provided by Scott Hultgren
pJIR418	*C. perfringens* shuttle vector	[4]
pLR23	*catP* from pJIR418 fused with the pUC19 origin of replication--*Fusobacterium* suicide vector	This study
pLR25	pLR23 with 0.5 kb fragment from ATCC23726 *siaT*	This study
pTrc99A	*E. coli* expression vector	provided by Scott Hultgren
pLR7	MG1655 *nanA* in pTrc99A: *E. coli* sialate lyase complementation vector	This study
pLR10	ATCC23726 *nanA-his* in pTrc99A: *Fusobacterium nucleatum* sialate lyase complementation vector	This study
Primers		
pUC19 ori F Sac Kpn Nco	TTTTCCATGGTATAGGTACCTTATGAGCTCGTTCCACTGAGCGTCAG	This study
pUC19 ori R Bgl2	AAATAGATCTCGCAGGAAAGAACATGTGAGC	This study
catP F Bgl2	AAAAGATCTGAGCTAAAGAGGTCCCTAGC	This study
catP R Bam Pst Nco	AAAACCATGGATATCTGCAGATATGGATCCAAG GTCTTTGTACTAACCTGTGG	This study
23726 nan F Nco	AAAACCATGGCCTCTTATTTGGAGTGAAGAGC	This study

23726 nan R Sac	AAAAGAGCTCAAGTAAGGACCAACCAACAG	This study
23726 nan test F1	GAGTGGCTAGGAGGAAGTC	This study
pLR24 5' F	GTTTGCAAGCAGCAGATTACG	This study
MG1655 nanA F Nco	AAAACCATGGCAACGAATTTACGTGG	This study
MG1655 nanA R Pst	AAAACTGCAGGAAAATTGTAGGGTACAGATGCG	This study
Fuso nanA F Nco	AAAACCATGGCAAAAGGGATATATTCAGCATTGATG	This study
Fuso nanA his R Bam	TTTTGGATCCTTAGTGGTGGTGGTGGTGGTGATTTT TTAAAAATTTTTTATGAAGTTCTTTTGC	This study
EFG95902 RT Fp	TGGAGCAGAACCTCAATCATAC	mutarotase This study
EFG95902 RT Rp	CAAGGTGCATCAAATGGTACTTC	mutarotase This study
EFG95903 RT Fp	TATGTGGGAACTGACTACCAAA	ccpA This study
EFG95903 RT Rp	GCCCTGTCTAAGAAACCATTTAG	ccpA This study
EFG95904 RT Fp	GGTGTTATGACAACTTCTGCTTT	siaP This study
EFG95904 RT Rp	GCAAATACTTCTGCTGCCTTG	siaP This study
EFG95905 RT Fp	AGTGGCTAGGAGGAAGTCTATT	siaT (A) Fwd primer This study
EFG95905 RT Rp	CTTCACTCCAAATAAGAGGGCTAT	siaT (A) Rev primer This study
SiaT insert RT Fp	CTGTTGGTTGGTCCTTACTTGT	siaT (B) Fwd Primer This study

SiaT insert RT Rp	TCCAGTAAGTATGAAGAATGGAACAC	siaT (B) Rev Primer This study
EFG95906 RT Fp	GATGTGAACTGTGTTGCTCTTG	Kinase This study
EFG95906 RT Rp	CCTCCACCTATACCTGTTCCTA	Kinase This study
EFG95907 RT Fp	TGATGGTTCCATACAATGAAGATG	nanA This study
EFG95907 RT Rp	CCCAGTACTTCCACCTACATATAA	nanA This study
EFG95908 RT Fp	CCAGTGATAGCTGAGGGAAATA	nanE This study
EFG95908 RT Rp	GGTCTAGTTATTGCTCCACCA	nanE This study
EFG95909 RT Fp	GTGCTTCAACAGCTACTTTATCAG	Transporter This study
EFG95909 RT Rp	TAGCATTCCTTCTCCAACTTCTT	Transporter This study
Fn 16S rRNA RT Fp	CTTAGGAATGAGACAGAGATG	[5]
Fn 16S rRNA RT Rp	TGATGGTAACATACGAAAGG	[5]
Gvag_tuf_AS3	RCGCAAACCAACRATCTCAACTGG	[6]
Gvag_tuf_S4	TCCCAACCCCAACTCACGATCTT	[6]

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