

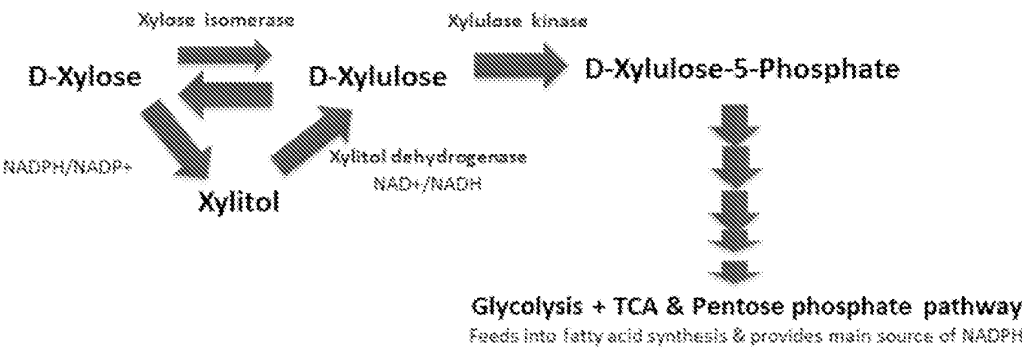


FIG. 1

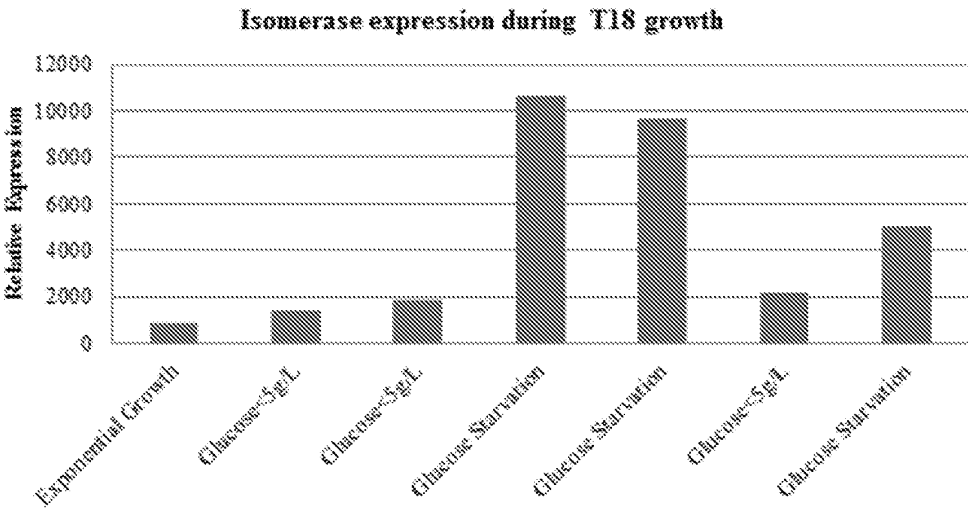


FIG. 2

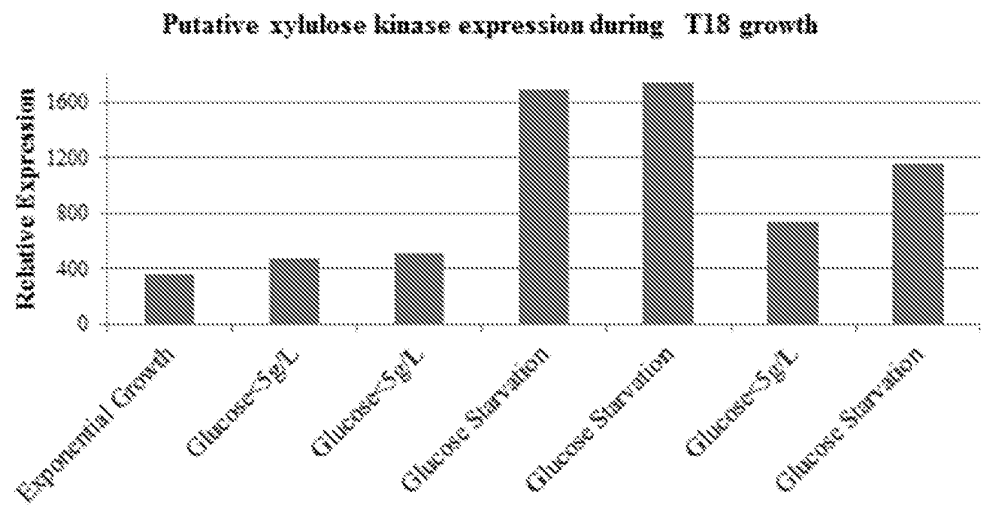


FIG. 3

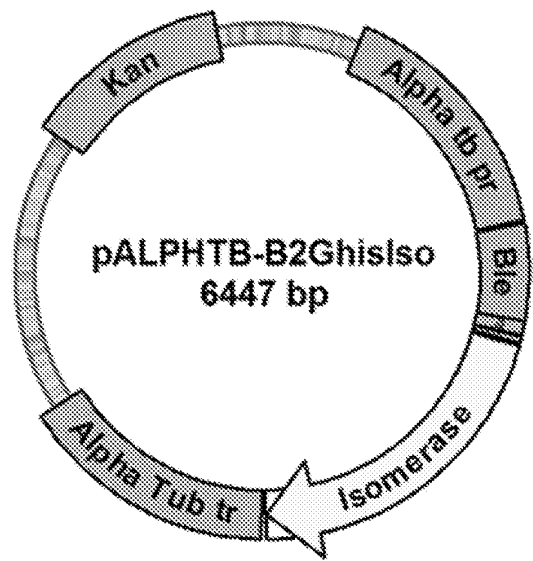


FIG. 4

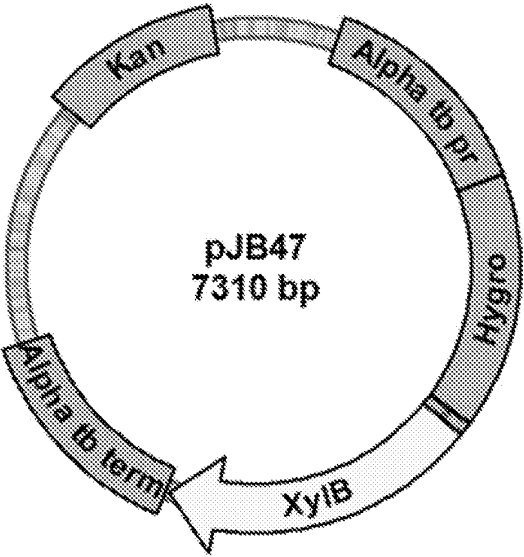


FIG. 5

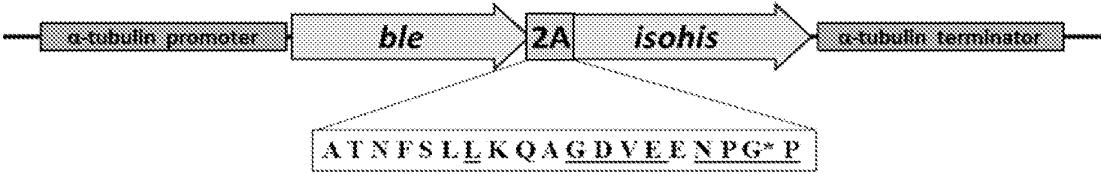


FIG. 6

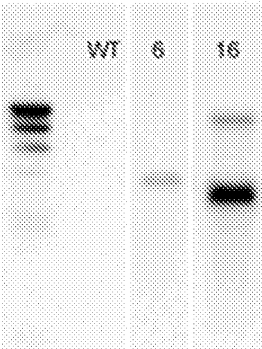


FIG. 7

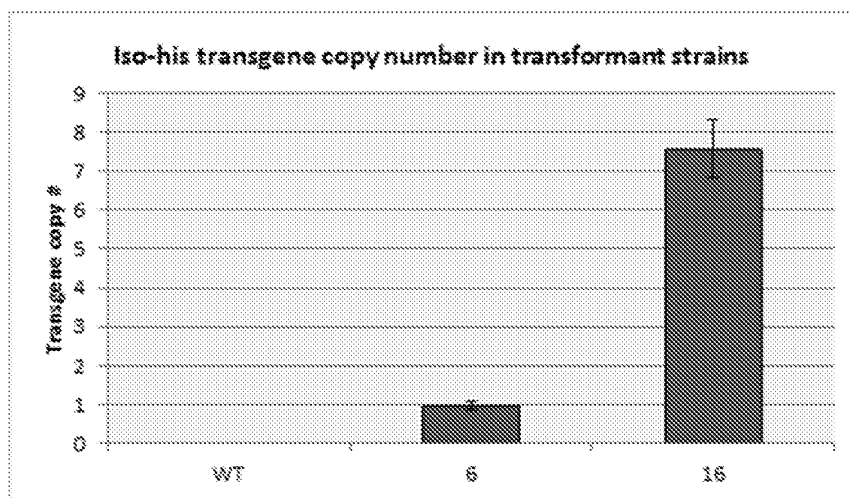


FIG. 8

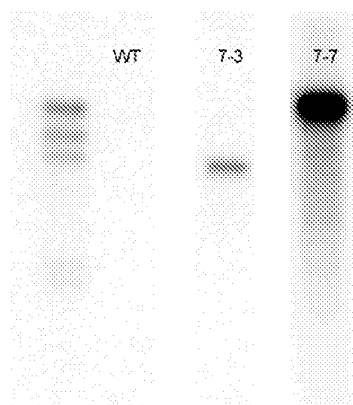


FIG. 9

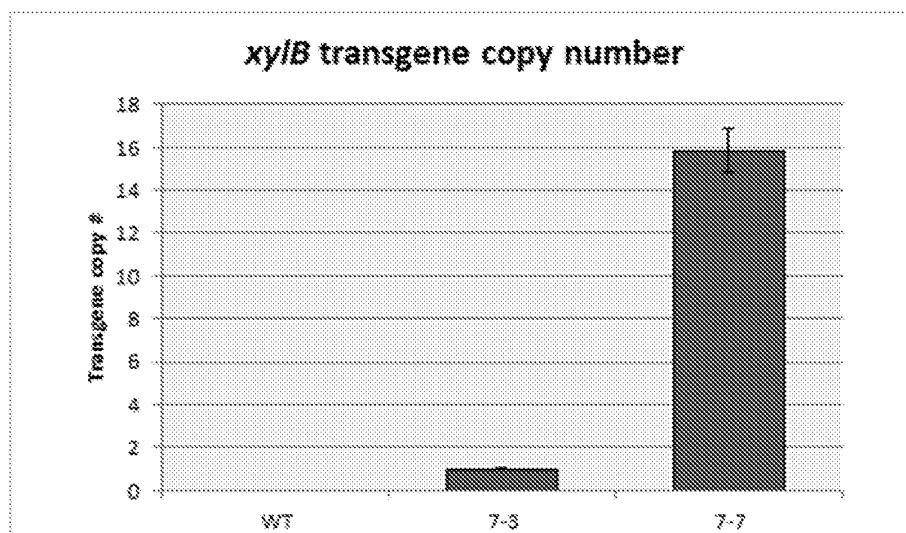


FIG. 10

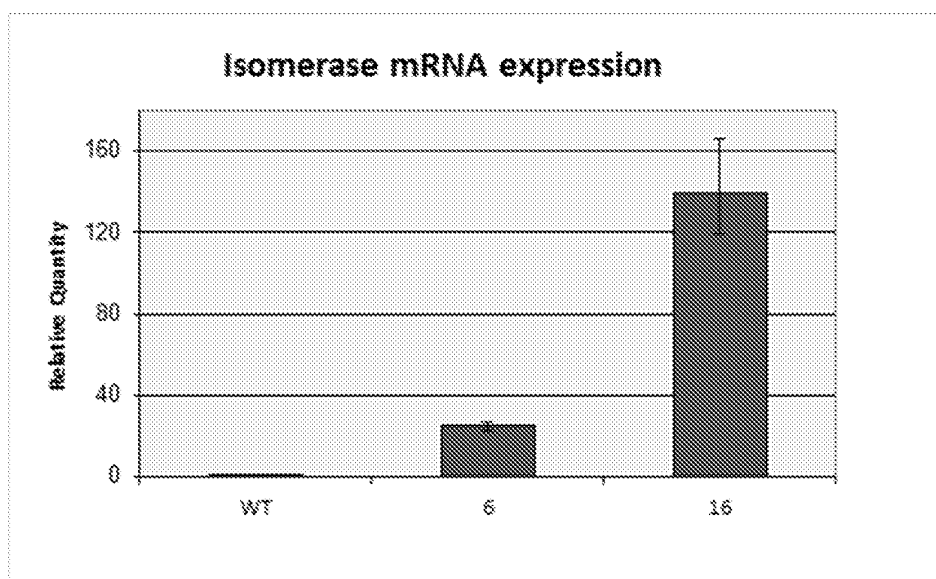


FIG. 11

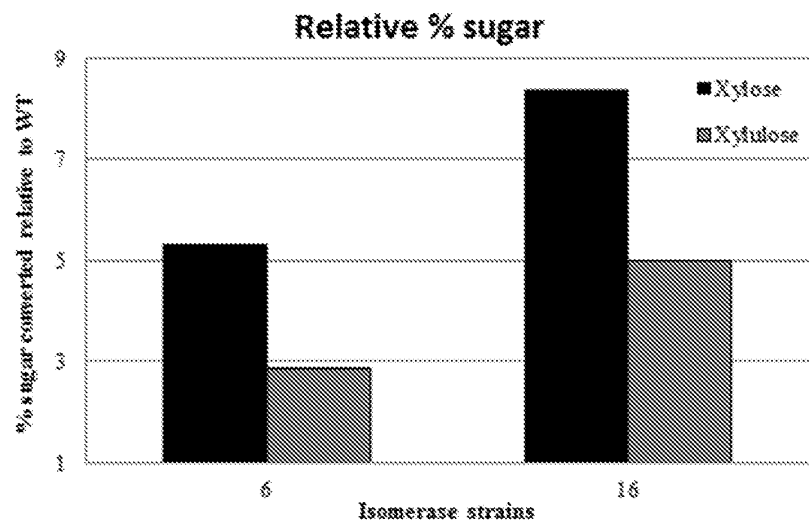


FIG. 12

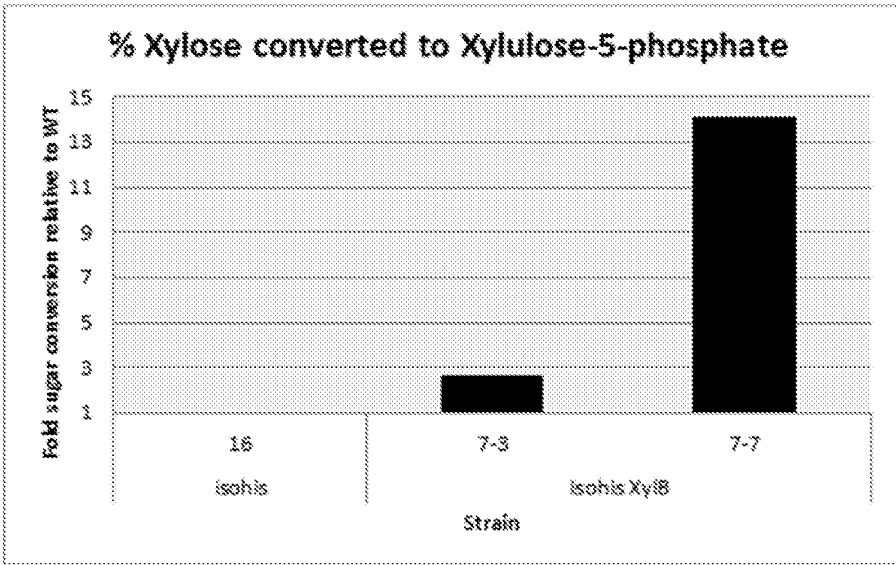


FIG. 13

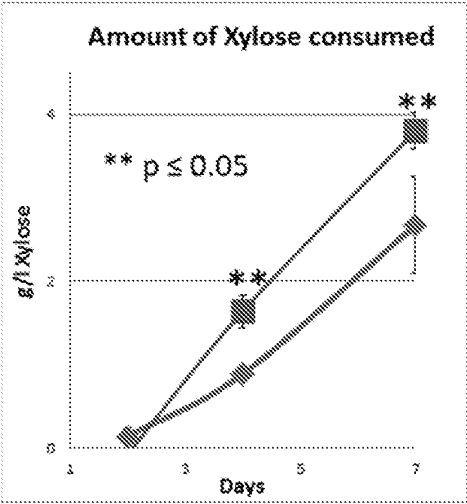


FIG. 14A

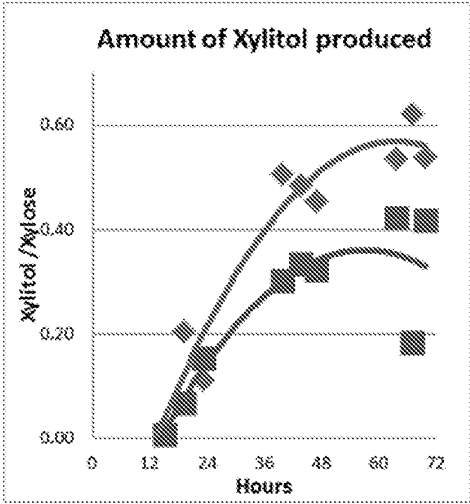


FIG. 14B

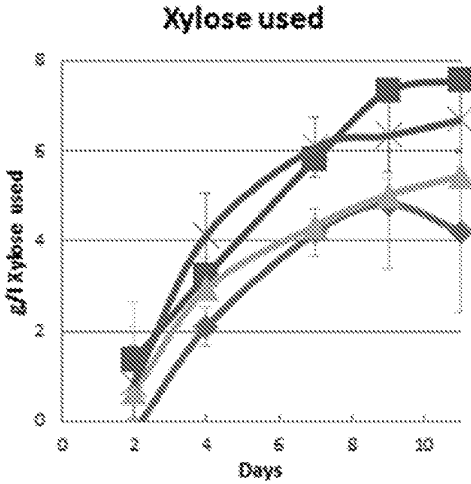


FIG. 15A

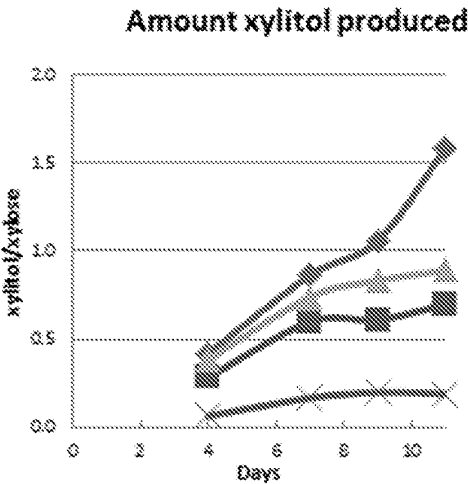


FIG. 15B

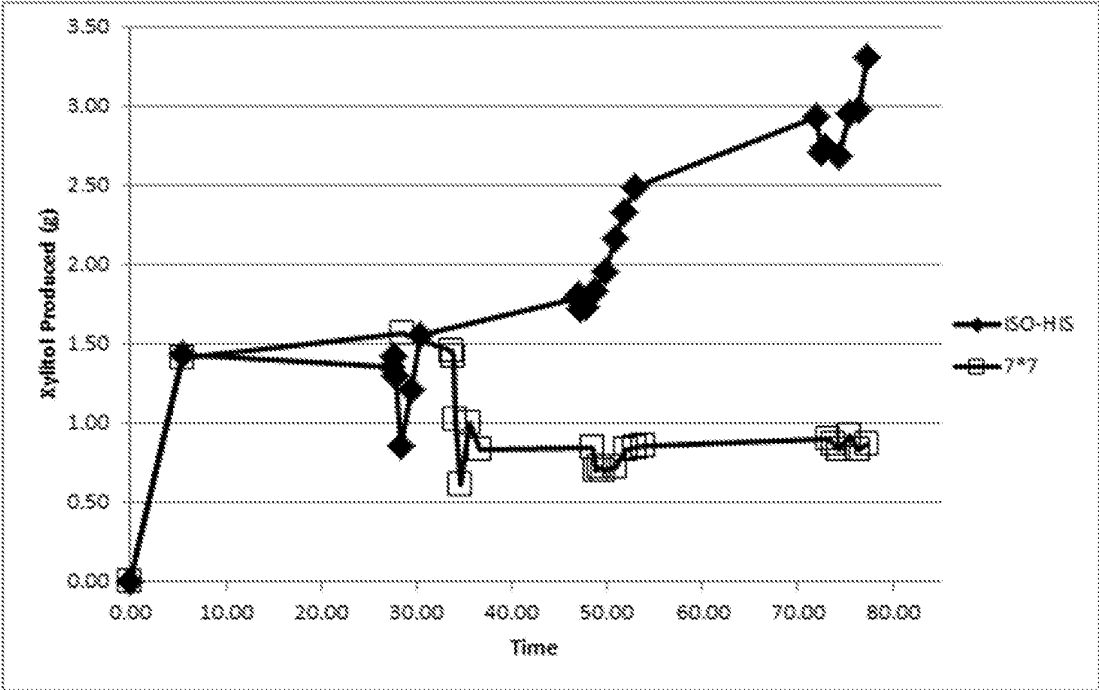


FIG. 16

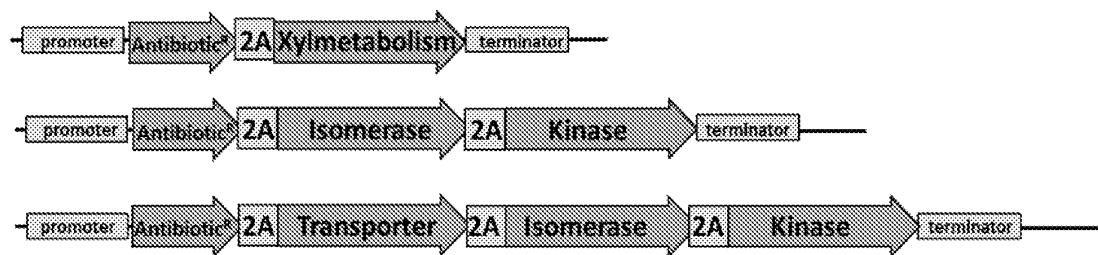


FIG. 17

Seq_1	1	atgtatatcgggatagatcttggcaacctcgggcgtaaaagttattttgctcaacgagcag	60
		# # # # # # # # # # #	
Seq_2	1	atgtacatcggcatcgacctcggcacctcgggcgtcaaggtcatcctcctcaacgagcag	60
Seq_1	61	ggtgaggtggttgctgcgcaaacggaaaagctgaccgtttcgcgcccgcacactctgg	120
		# # # # # # # # # # #	
Seq_2	61	ggcgaggtcgtcgccgcccagaccgagaagctcaccgtctcgcgcccgcacccgctctgg	120
Seq_1	121	tcggaacaagacccggaacagtggtggcaggcaactgatcgcgcaatgaaagctctgggc	180
		# # # # # # # # # # #	
Seq_2	121	tcggagcaggacccgagcagtggtggcaggccaccgaccgcgcctatgaaggccctcggc	180
Seq_1	181	gatcagcattctctgcaggacgttaaagcattgggtattgcccggccagatgcacggagca	240
		# # # # # # # # # # #	
Seq_2	181	gaccagcactcgctccaggacgtcaaggccctcggcatcgccggccagatgcacggcgcc	240
Seq_1	241	accttgctggatgctcagcaacgggtgttacgcctgccatttttggaacgacgggcgc	300
		# # # # # # # # # # #	
Seq_2	241	acctcctcgacgccagcagcgcgtcctccgcgggccatcctctggaacgacggccgc	300
Seq_1	301	tgtcgcgaagagtgcactttgtcggaaagcgcgagttccgcaatcgcgggtgattaccggc	360
		# # # # # # # # # # #	
Seq_2	301	tgcccaggagtgcaccctcctcagggccgcgctccgcagtcgcggtcatcaccggc	360
Seq_1	361	aacctgatgatgcccggattactgcgcctaaattgctatgggttcagcggcatgagccg	420
		# # # # # # # # # # #	
Seq_2	361	aacctcatgatgcggggcttcaccgcccgaagctcctctgggtccagcggccacgagccg	420
Seq_1	421	gagatattcgcgtcaaatcgacaagattattaccgaaagattacttcgctctgcgtatg	480
		# # # # # # # # # # #	
Seq_2	421	gagatcttcgcgcgatcgacaaggtcctcctccgaggactacctccgcctcgcgatg	480
Seq_1	481	acgggggagtttgccagcgatatgtctgcgcagctggcaccatgtggctggatgtcgca	540
		# # # # # # # # # # #	
Seq_2	481	accggcgagttcgctcggacatgtcggacgcgcggcgaccatgtggctcgacgtcgcc	540
Seq_1	541	aagcgtgactggagtgcgtcatgctgcaggcttgcgacttatctcgtgaccagatgcc	600
		# # # # # # # # # # #	
Seq_2	541	aagcgcgactggtcggacgtcatgctcaggcctcgcacctctcgcgcgaccagatgcgc	600
Seq_1	601	gcattatacgaaggcagcgaaattactggtgctttgttacctgaagttgcgaaagcgtgg	660
		# # # # # # # # # # #	
Seq_2	601	gccctctacgagggctcggagatcacggcgccctcctccggaggtcgccaaaggcctgg	660
Seq_1	661	ggtatggcgacggtgccagttgtcgcaggcgggtggcgacaatgcagctgggtgcagttggt	720
		# # # # # # # # # # #	
Seq_2	661	gcctatgccaccgtcccggtcgtcgcgcgcgcgcgcgacacacgccgcgcgcgcctcgc	720

Seq_1	661	ggtatggcgacgggtgccagttgtcgacggcggtggcgacaatgcagctggcgagttggt	720
Seq_2	661	ggcatggccaccgtcccggctcgtcgccggcgggcgacaacgccgcggcgccgtcggc	720
Seq_1	721	gtgggaatgggtgatgctaatacaggcaatgttatcgctggggacgtcgggggtctatttt	780
Seq_2	721	gtcggcatggtcgacgccaaccaggccatgctctcgctcggcacctcgggctctacttc	780
Seq_1	781	gctgtcagcgaagggttcttaagcaagccagaaagcgccgtacatagcttttgccatgcg	840
Seq_2	781	gccgtctcggagggttcctctcgaagccggagtcggccgtccactcgttctgccacgcc	840
Seq_1	841	ctaccgcaacgttggcatttaatgtctgtgatgctgagtcgacgctcgtgtctggattgg	900
Seq_2	841	ctcccgacgctggcacctcatgtcggtcacgtctcggccgctcgtgcctcgactgg	900
Seq_1	901	gccgcgaaattaaccggcctgagcaatgtcccagctttaatcgctgcagctcaacaggct	960
Seq_2	901	gccgccaagctcaccggcctctcgaacgtcccggccctcatcgccgcgcggccagcagcc	960
Seq_1	961	gatgaaagtgcgcgacgcagtttggtttctgccttatctttccggcgagcgtacgccacac	1020
Seq_2	961	gacgagtcggcgagccgggtctggttctctccgtacctctcgggcgagcgcacccgcac	1020
Seq_1	1021	aataatccccaggcgaagggggtttcttttggtttgactcatcaacatggccccaatgaa	1080
Seq_2	1021	aacaaccgcagggccaagggcgtcttcttcggcctcaccaccagcacggcccgaacgag	1080
Seq_1	1081	ctggcgcgagcagtgctggaaggcgtgggttatgcgctggcagatggcatggatgtcgtg	1140
Seq_2	1081	ctcgcccgcgccgtcctcgaggcgctcgggtacgccctcgccgacggcatggacgtcgtc	1140
Seq_1	1141	catgcctgcggtattaaaccgcaaagtgttacgttgattggggcgggcgcgtagtgag	1200
Seq_2	1141	cacgcctcggcatcaagccgcagtcggtcaccctcatcggcggcgggcgccgctcggag	1200
Seq_1	1201	tactggcgtcagatgctggcggatatacgcggtcagcagctcgattaccgtacggggggg	1260
Seq_2	1201	tactggcgccagatgctcgccgacatctcgggccagcagctcgactaccgcaccggcggc	1260
Seq_1	1261	gatgtggggccagcactgggcgcagcaaggctggcgagatcgccggcgaatccagagaaa	1320
Seq_2	1261	gacgtcggcccgccctcggcgccgcccgcctcgccagatcgccgccaaccggagaa	1320
Seq_1	1321	tcgctcattgaattgttgccgcaactaccgttagaacagtcgcatctaccagatgcgcag	1380
Seq_2	1321	tcgctcatcgagctcctcccgcagctcccgcctcgagcagtcgcacctcccggacgccag	1380
Seq_1	1381	cgttatgccgcttatcagccacgacgagaaaacgttcgctcgccctctatcagcaacttctg	1440
Seq_2	1381	cgctacgccgctaccagccgcgcgagaccttcgccgctctaccagcagctcctc	1440
Seq_1	1441	ccattaatggcgtaa	1455
Seq_2	1441	ccgctcatggcctaa	1455

FIG. 18-2

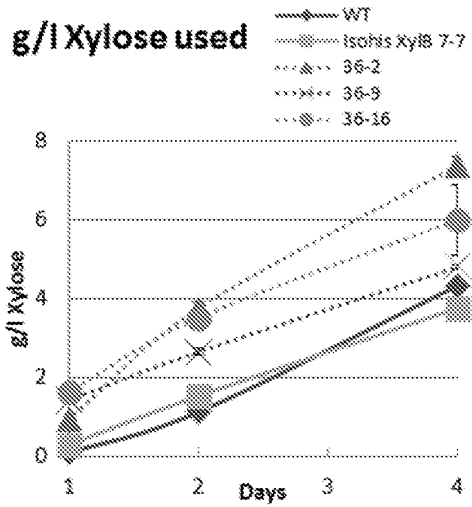


FIG. 19A

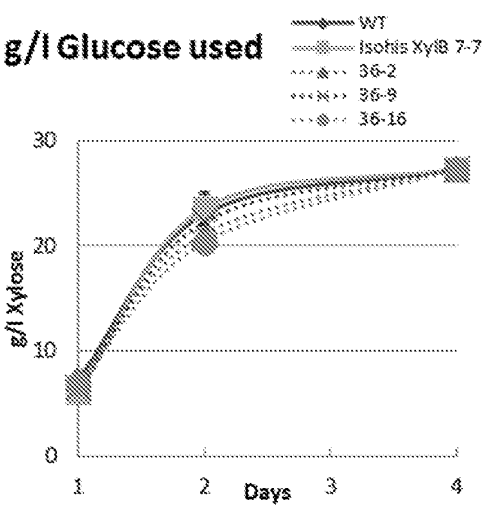


FIG. 19B

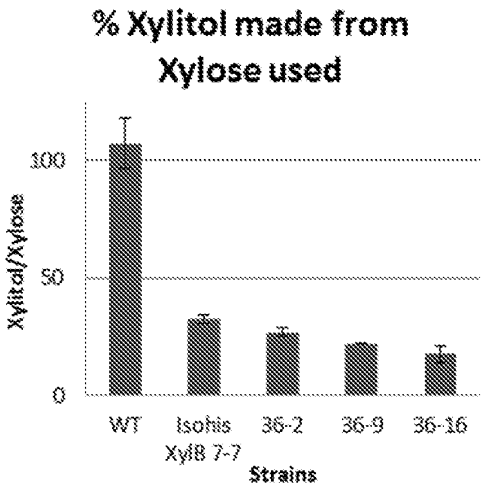


FIG. 19C

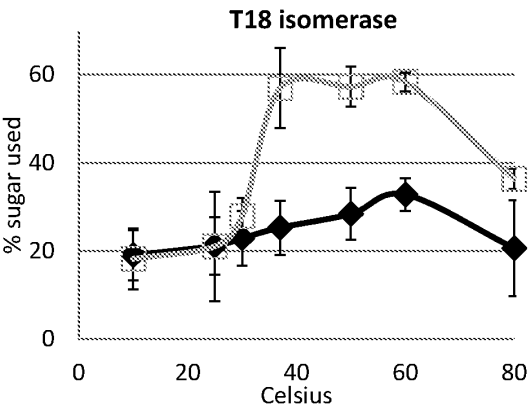


FIG. 20A

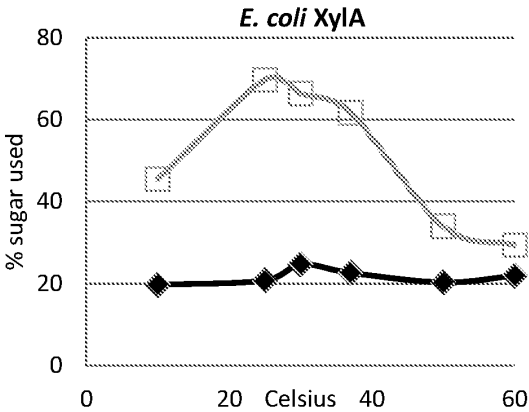


FIG. 20B

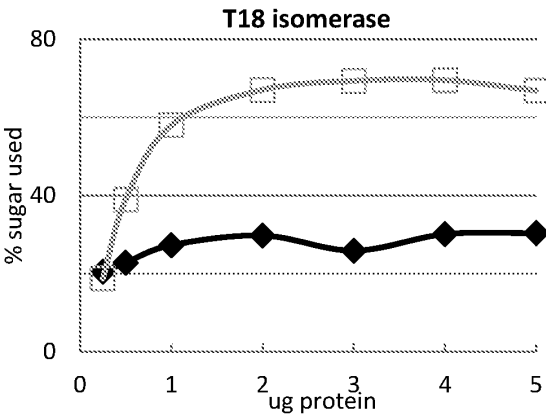


FIG. 21A

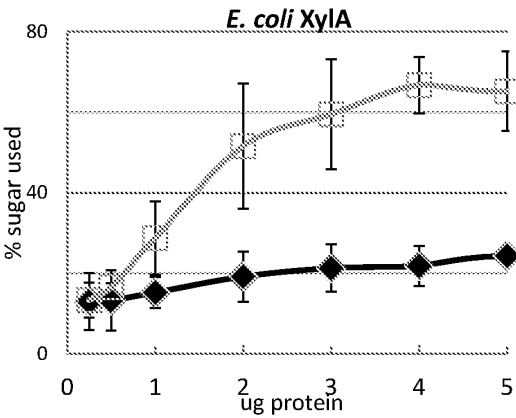


FIG. 21B

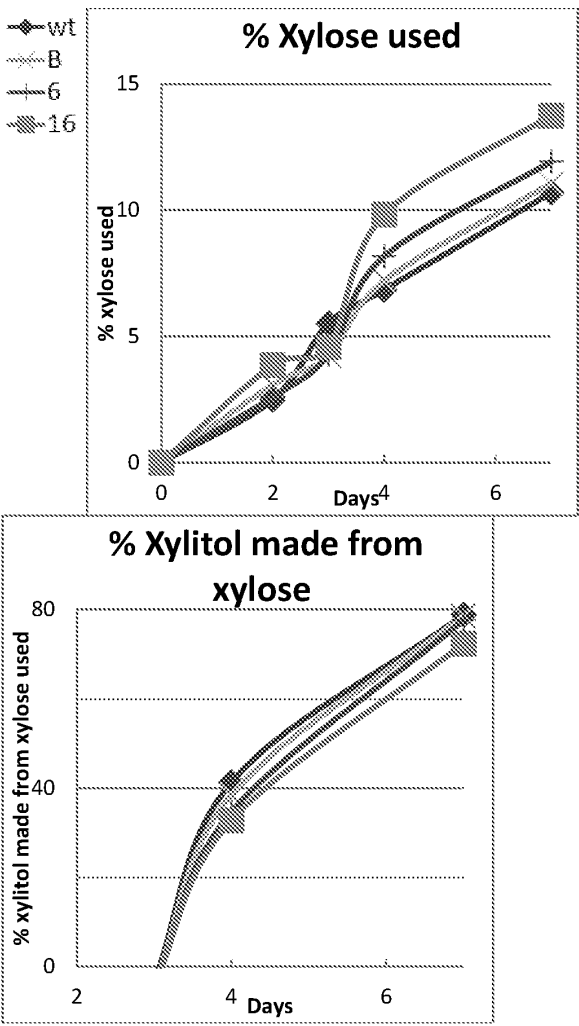


FIG. 22A

FIG. 22B

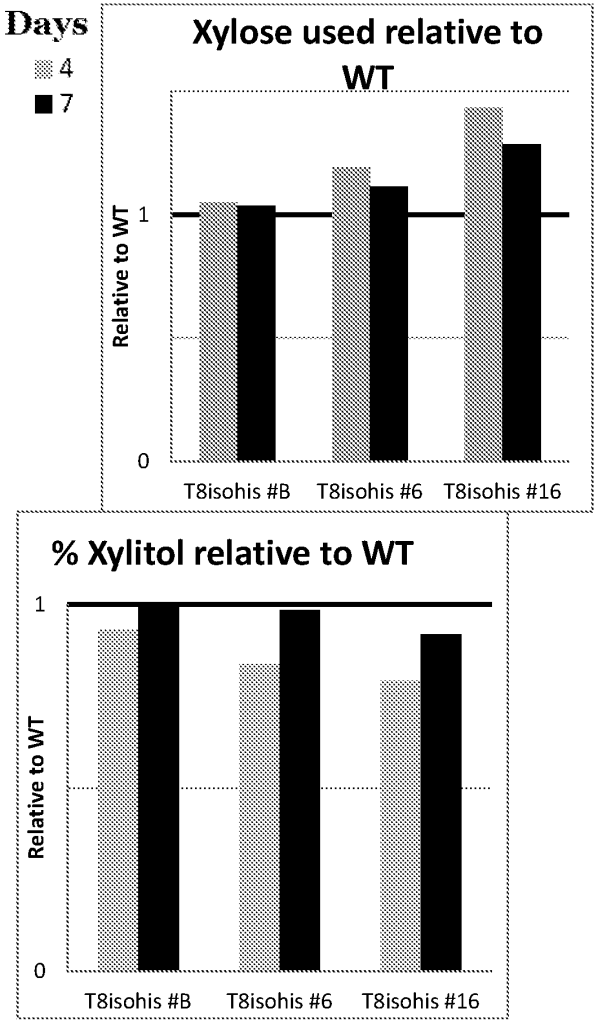


FIG. 22C

FIG. 22D

◆ T18WT
■ T18isoHis#16
▲ T18 isoHis xylB 7-7
✱ T18 isoHis xylB 7-3

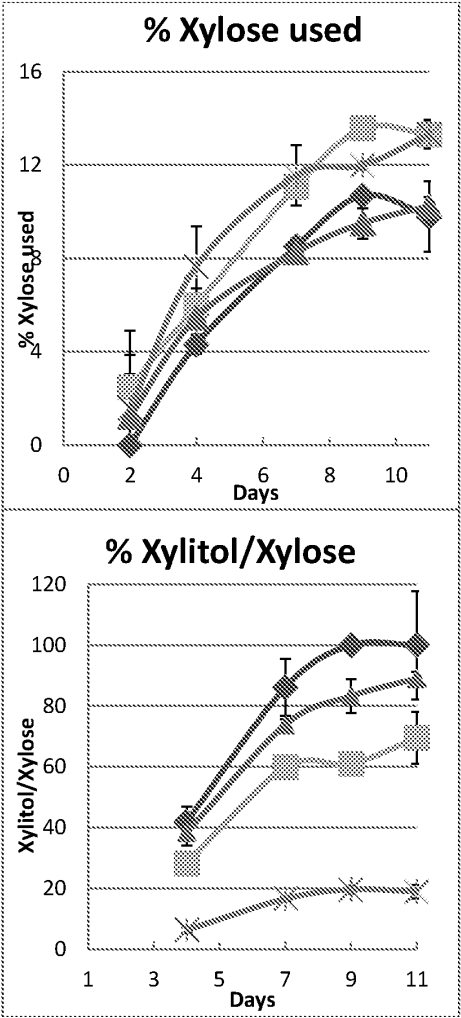


FIG. 23A

FIG. 23B

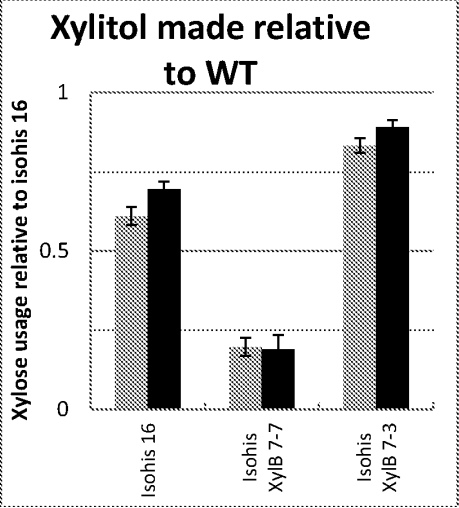
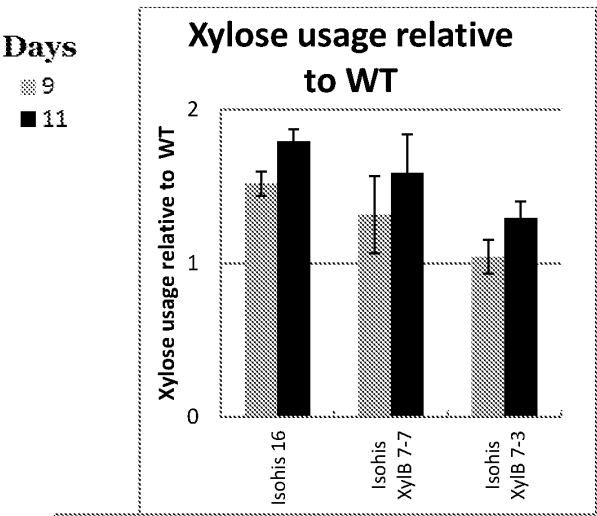


FIG. 23C

FIG. 23D

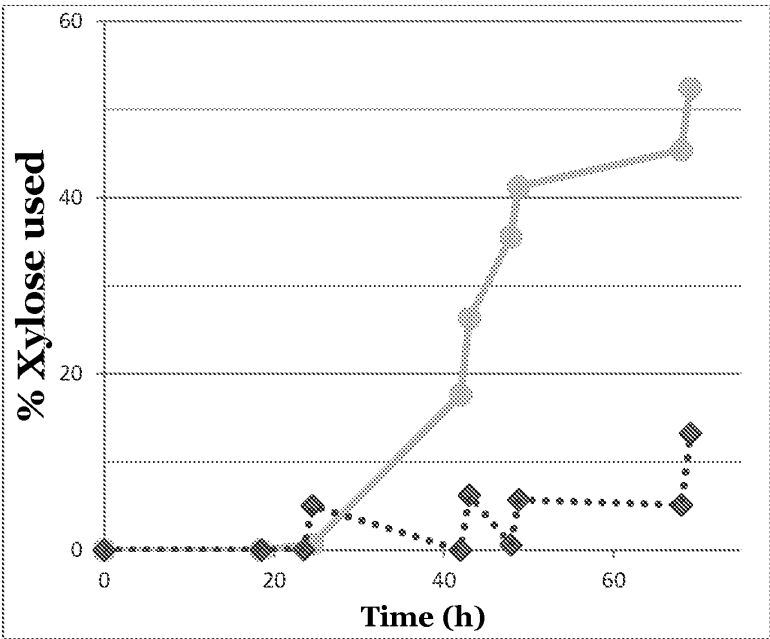


FIG. 24

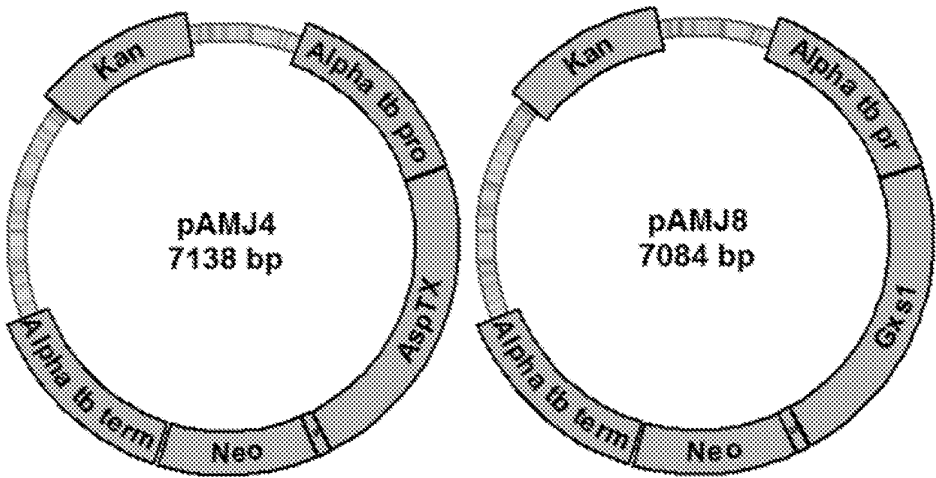


FIG. 25

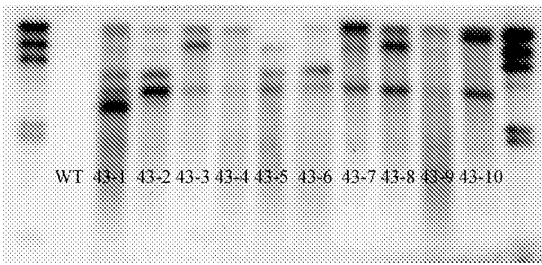


FIG. 26A

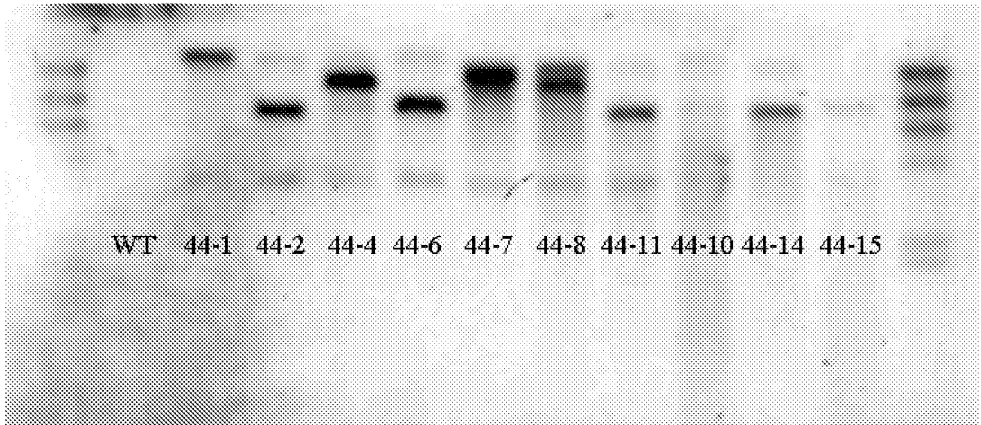


FIG. 26B

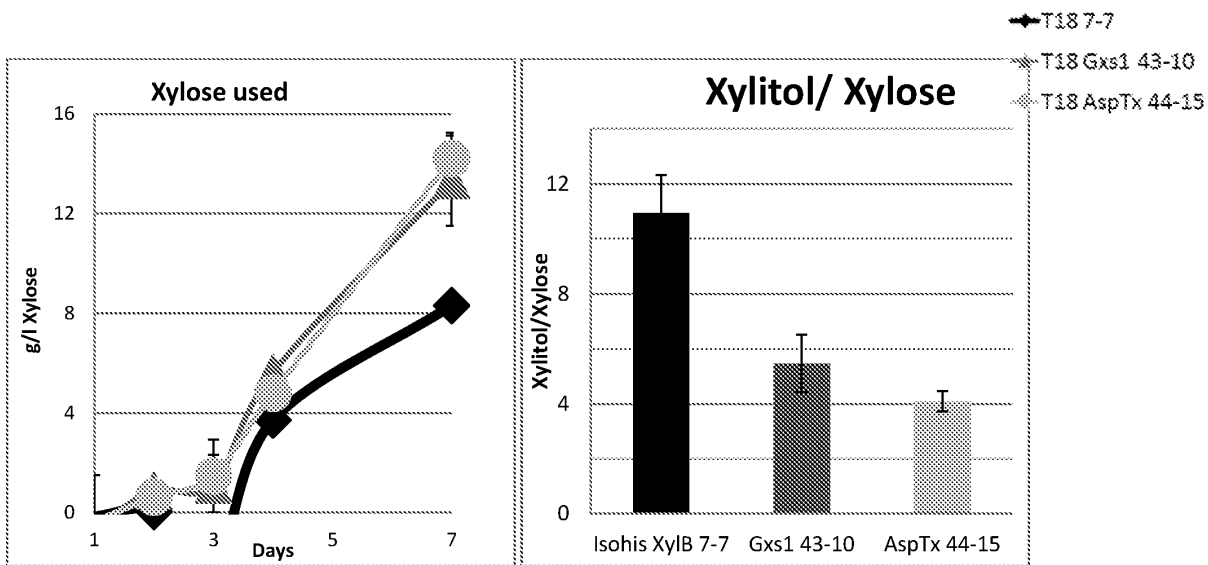
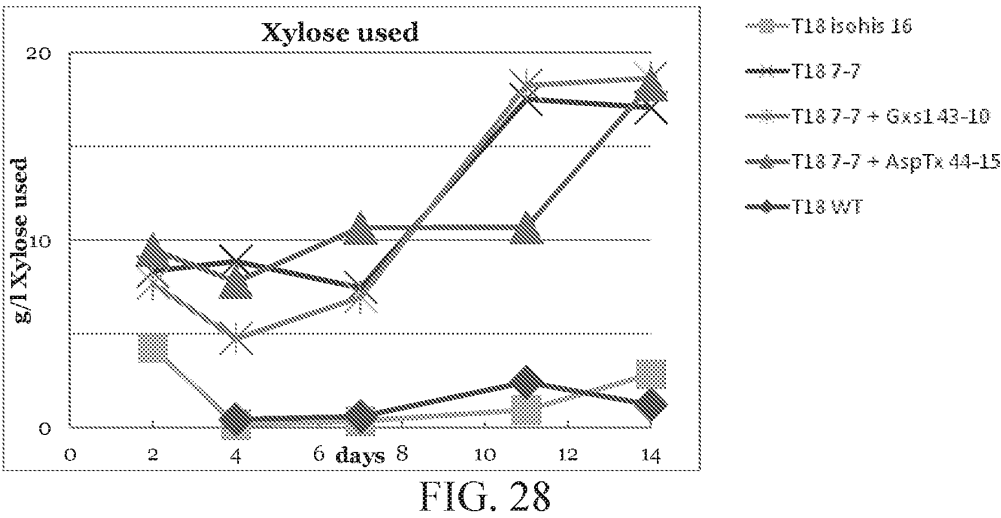
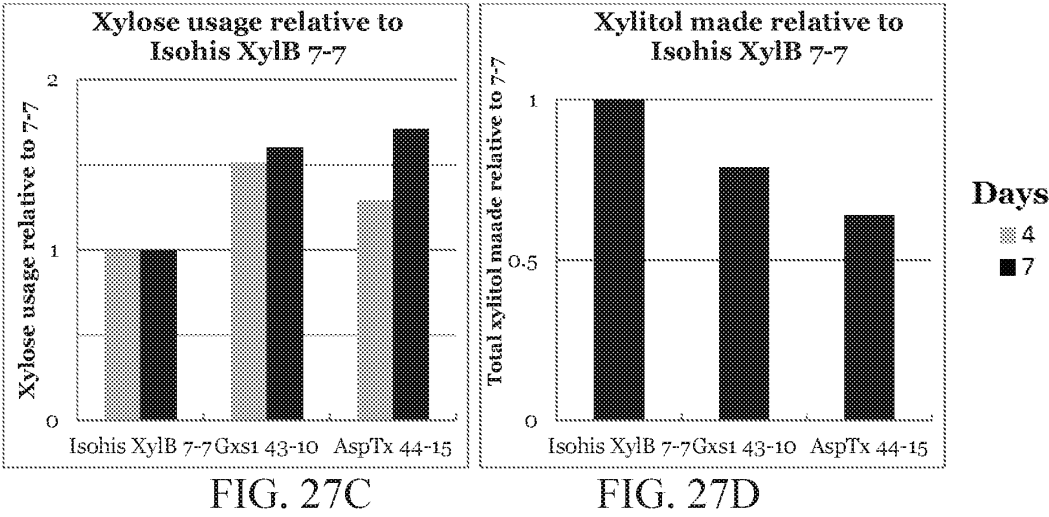


FIG. 27A

FIG. 27B



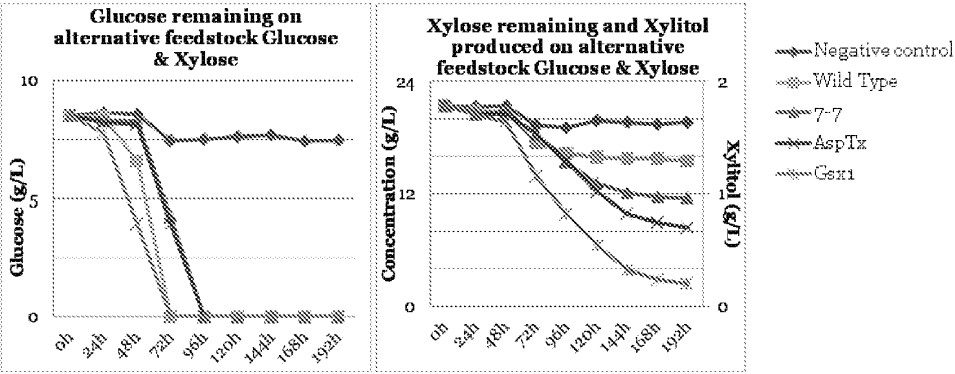


FIG. 29A

FIG. 29B