Legends

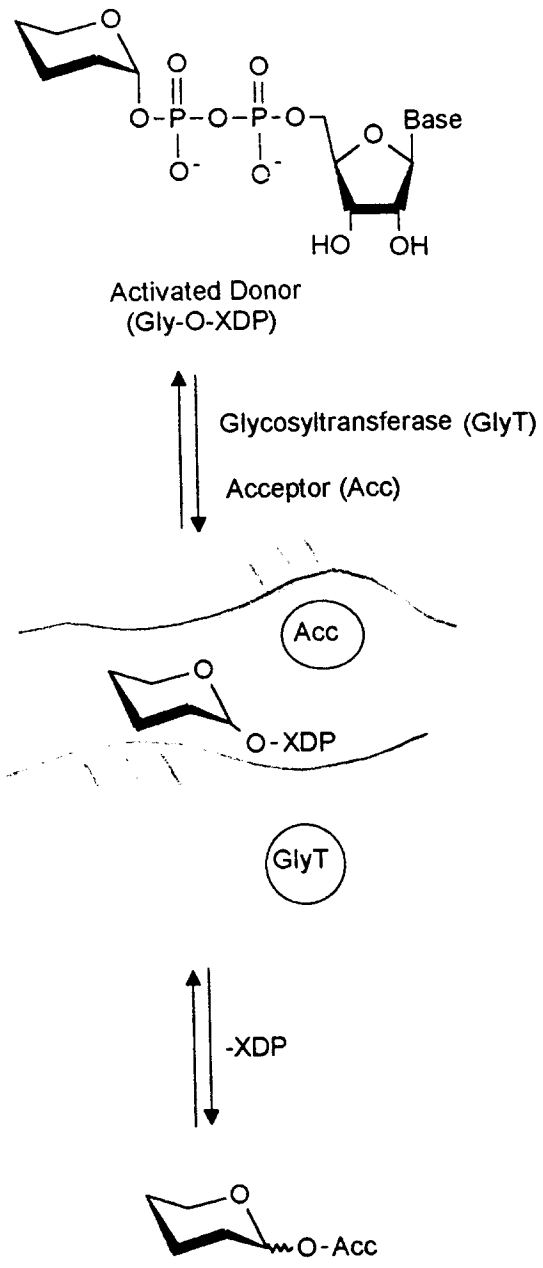
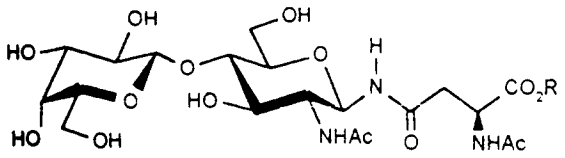
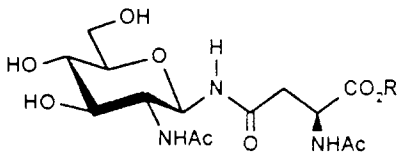
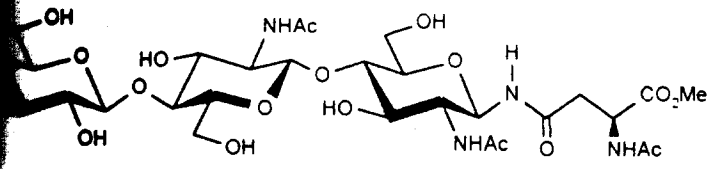

Base
HO
OH
Activated Donor
(Gly-O-XDP)
Glycosyltransferase (GlyT)
Acceptor (Acc)
Acc
O-XDP
GlyT
-XDP
O-Acc

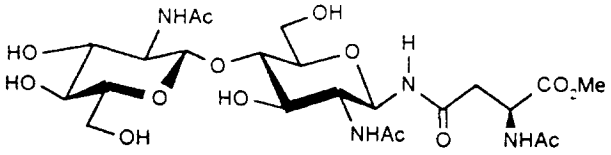
Fig. 1.

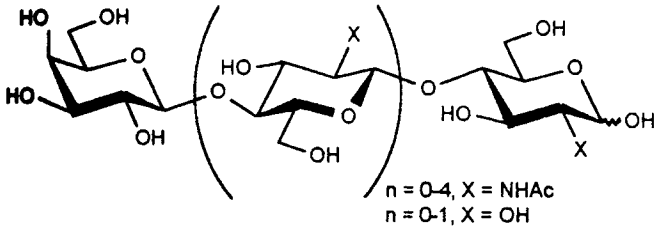




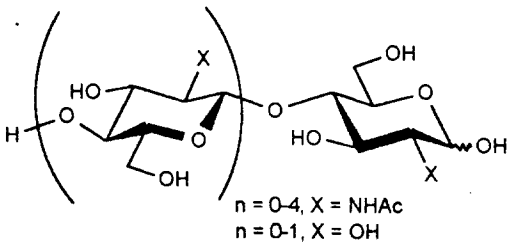
R = H, Me



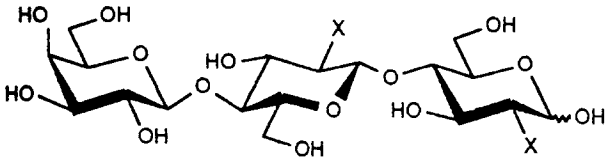


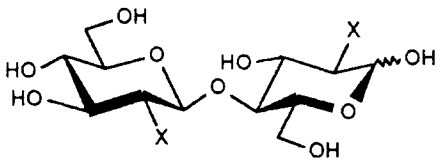


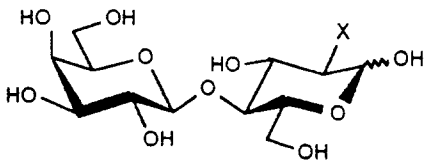
n = 0-4, X = NHAc
n = 0-1, X = OH

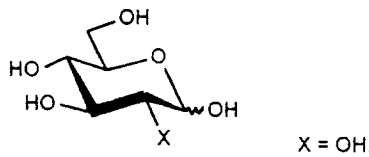


n = 0-4, X = NHAc
n = 0-1, X = OH





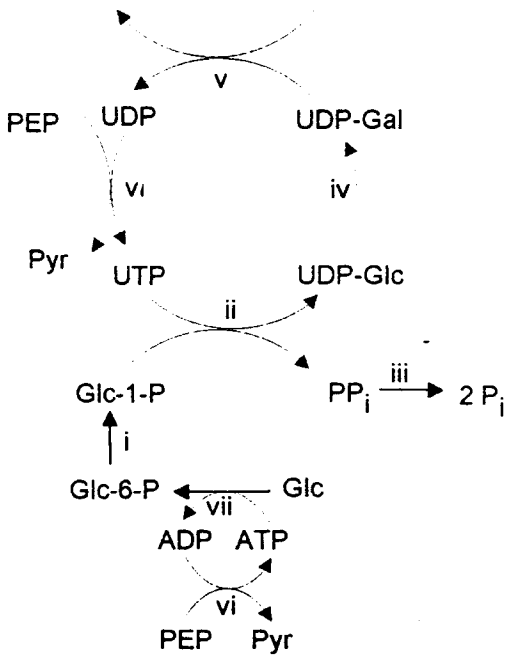




Products

Acceptor Substrates

X = OH, NHAc



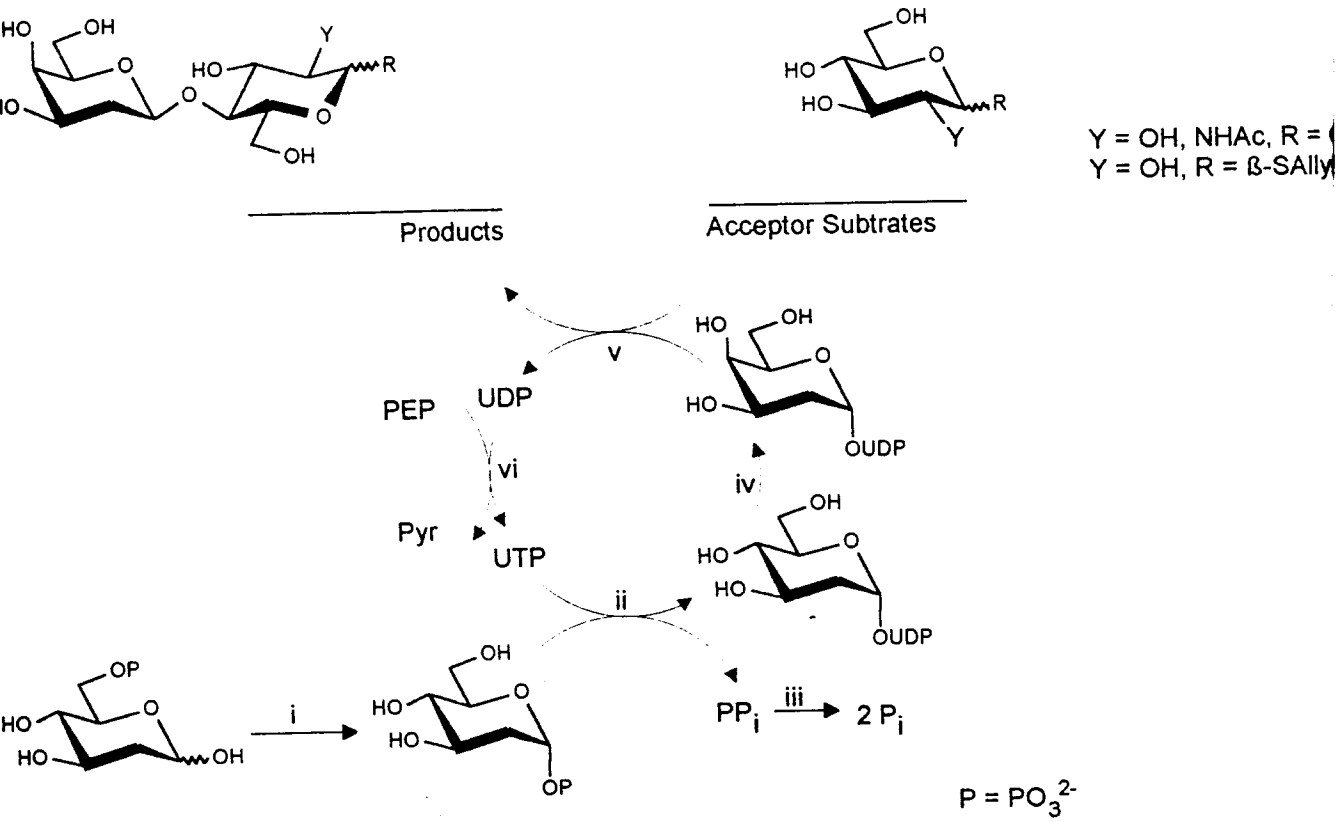

Y = OH, NHAc, R =
Y = OH, R = ß-SAlly
Products
Acceptor Subtrates
PEP
UDP
Pyr
UTP
OUDP
PPi
2 Pi
P = PO3 2-

Fig. 3.

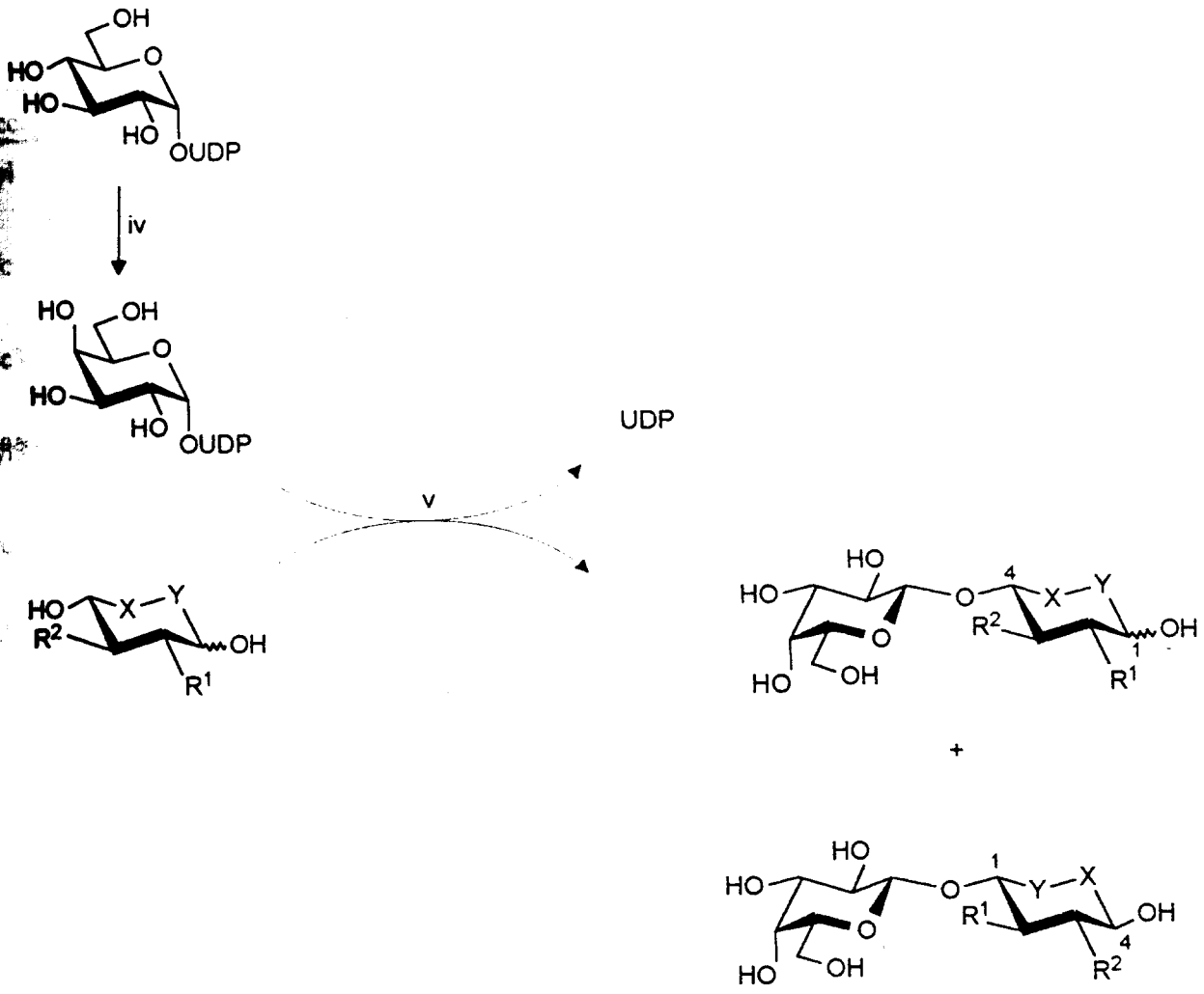
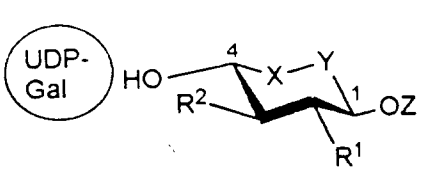
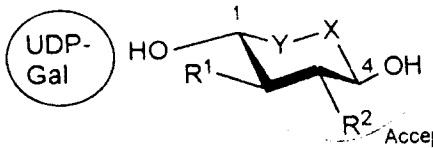

OH
HO
HO
HO
OUDP
iv
HO
OH
HO
HO
OUDP
UDP
v
HO
X
Y
HO
R2
OH
R1
HO
HO
4
X
Y
O
R2
OH
HO
OH
1
R1
+
HO
HO
1
O
Y
X
R1
OH
HO
OH
4
R2

Fig. 4,



UDP-Gal
binding site

Acceptor
binding site



UDP-Gal
binding site

Acceptor
binding site

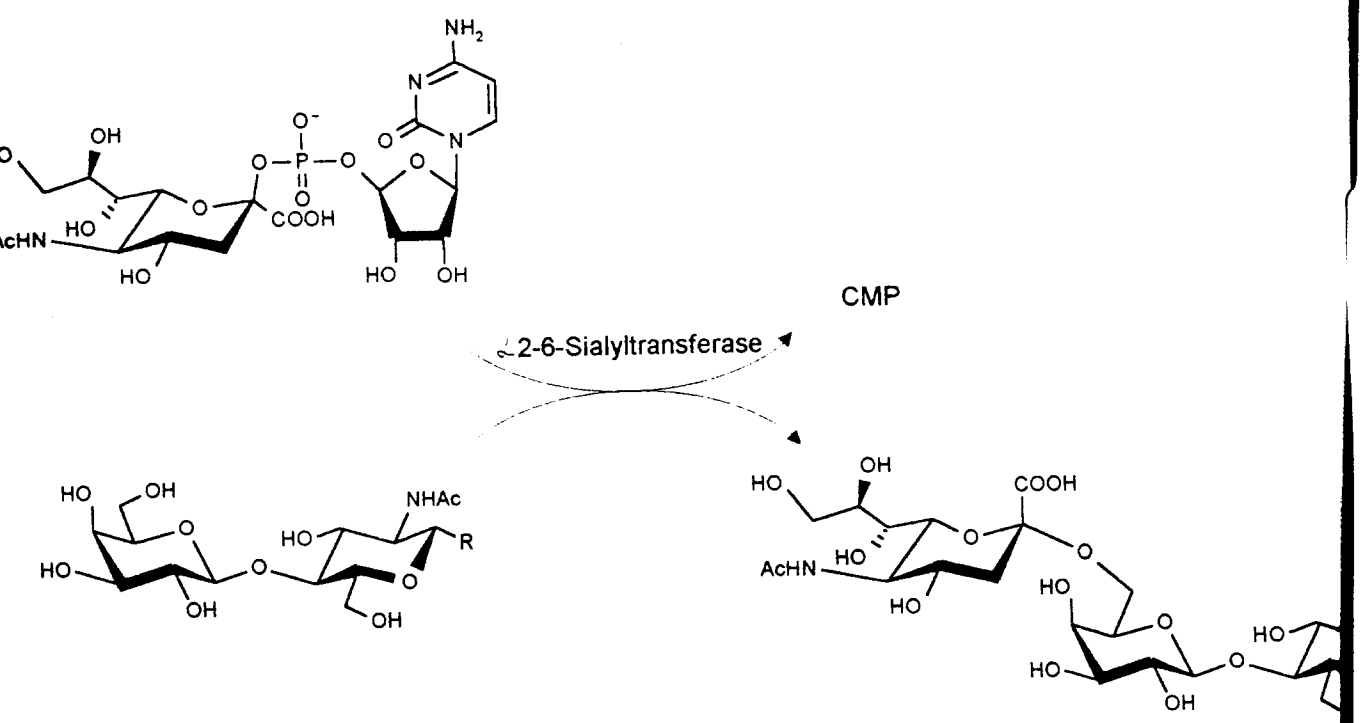
Z = Heterooligo

Orientation

normal reverse

Fig. 5.

Acceptors	R^1	R^2	X	Y	Substrate	Orientation	Product
Xyl	OH	OH	CH_2	O	+	n	β1-4
	OH	OH	O	CH_2	+	r	β1-β1
Glc	OH	OH	e-CH(CH_2OH)	O	+	n	β1-4
	OH	OH	O	CHe-(CH_2OH)	-	r	
Glc3NAc	OH	NHAc	e-CH(CH_2OH)	O	-	n	
	NHAc	OH	O	CHe-(CH_2OH)	+	r	β1-β1
Xyl3NAc	OH	NHAc	CH_2	O	-	n	
	NHAc	OH	O	CH_2	+	r	β1-β1
GlcNAc	NHAc	OH	e-CH(CH_2OH)	O	+	n	β1-4
	OH	NHAc	O	CHe-CH_2OH)	-	r	
5SXyl3NAc	OH	NHAc	CH_2	S	-	n	
	OH	NHAc	CH_2	S	+	r	β1-β1



a: R = OH, b: R = OCH_3, c: R = NH-CO-CH_2-CH(NH_2)COOH, d: R = Aloc-Phe-Asn-Thr-Ile-OH,

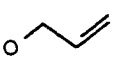
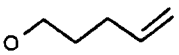
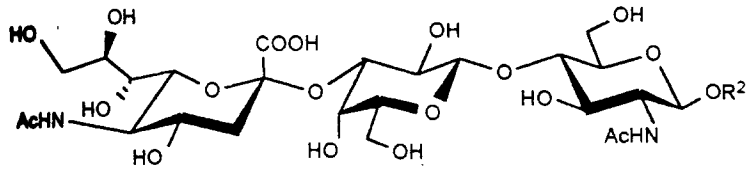
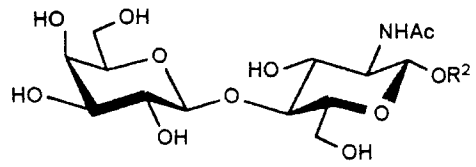
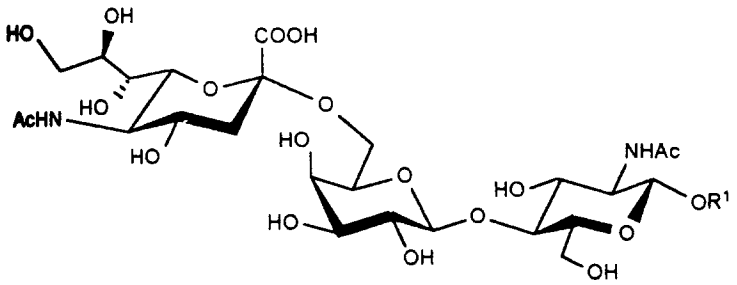
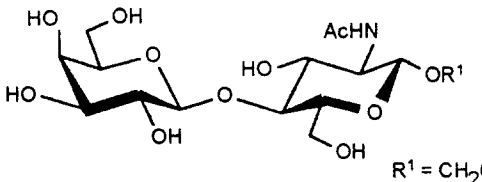
e: R =  , f: R = 

Fig. 6.







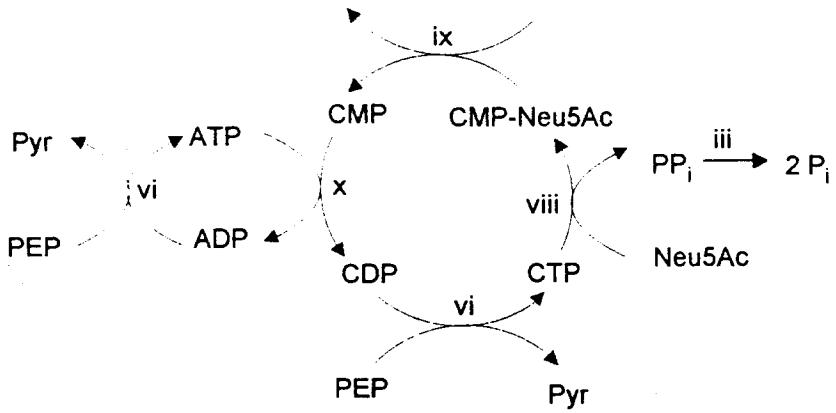


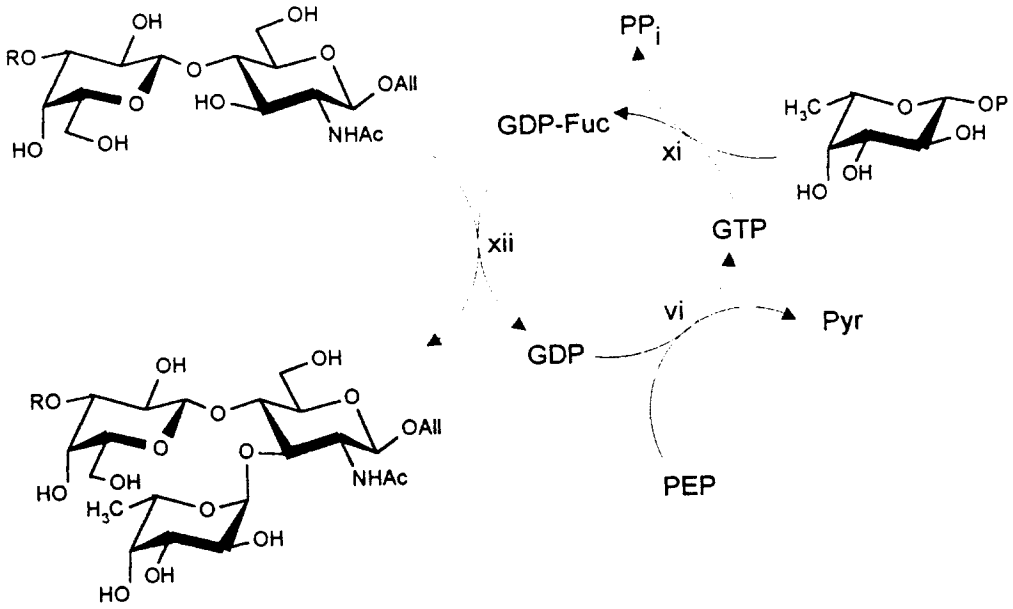
$R^1 = CH_2CH=CH_2$

$R^2 = (CH_2)_3CH=CH_2$

Products

Acceptor Substrates





R = H, Neu5Acα2-

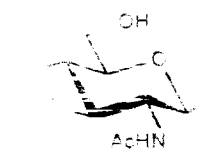
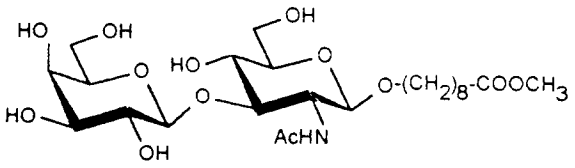
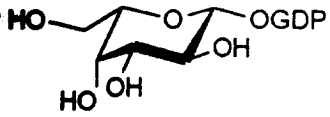


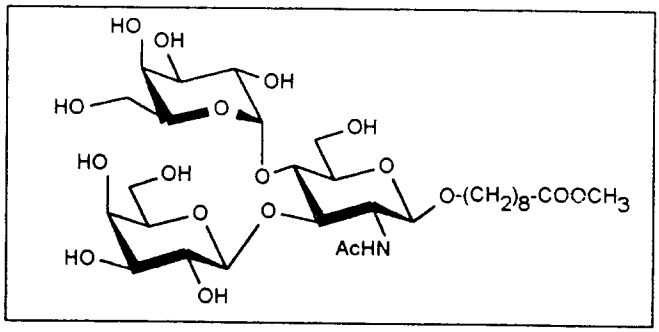
Fig. 8.

Acceptor Substrate

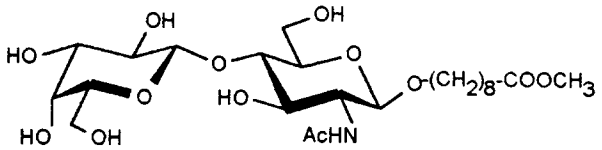


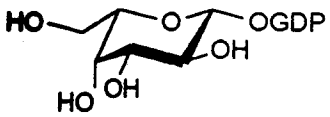
Donor Substrates

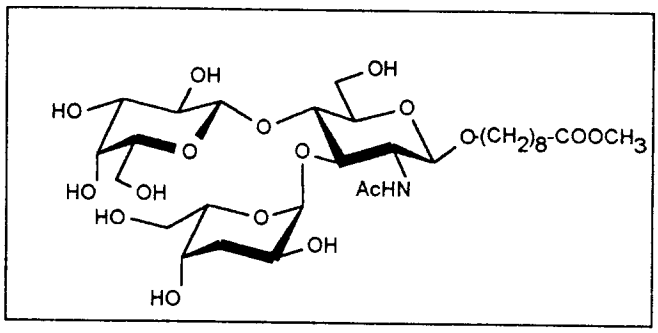


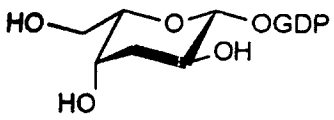


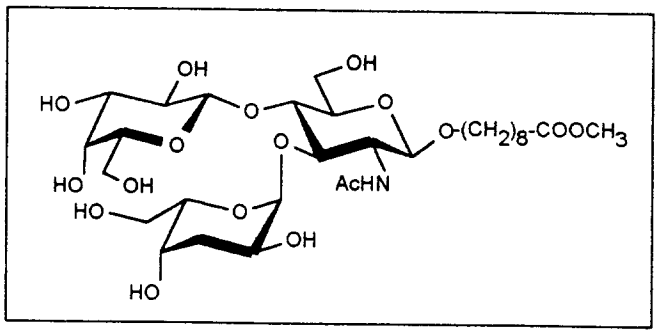
Acceptor Substrate

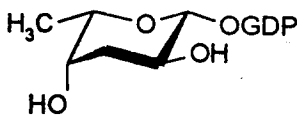


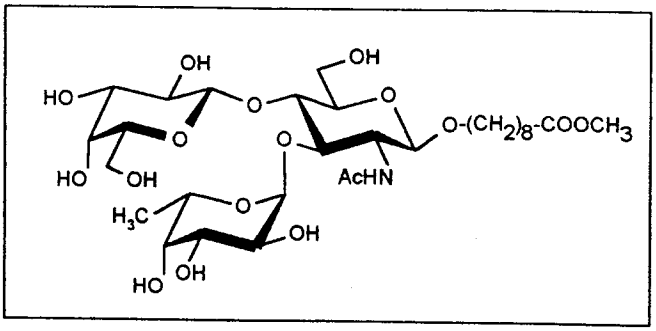


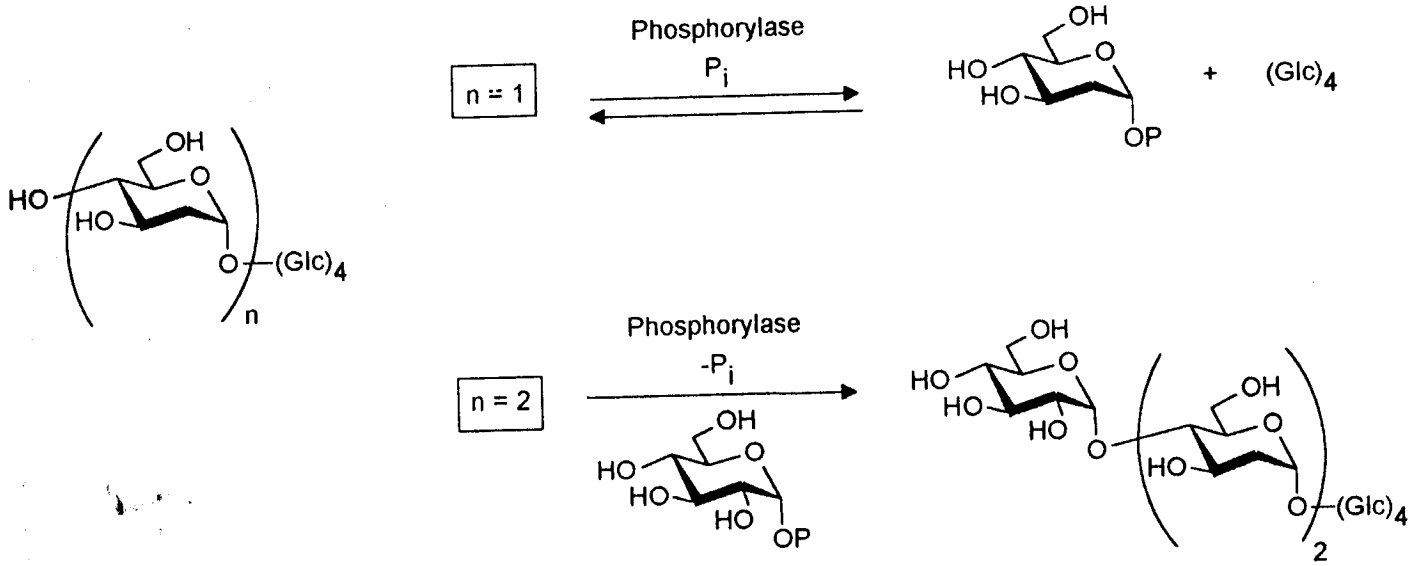


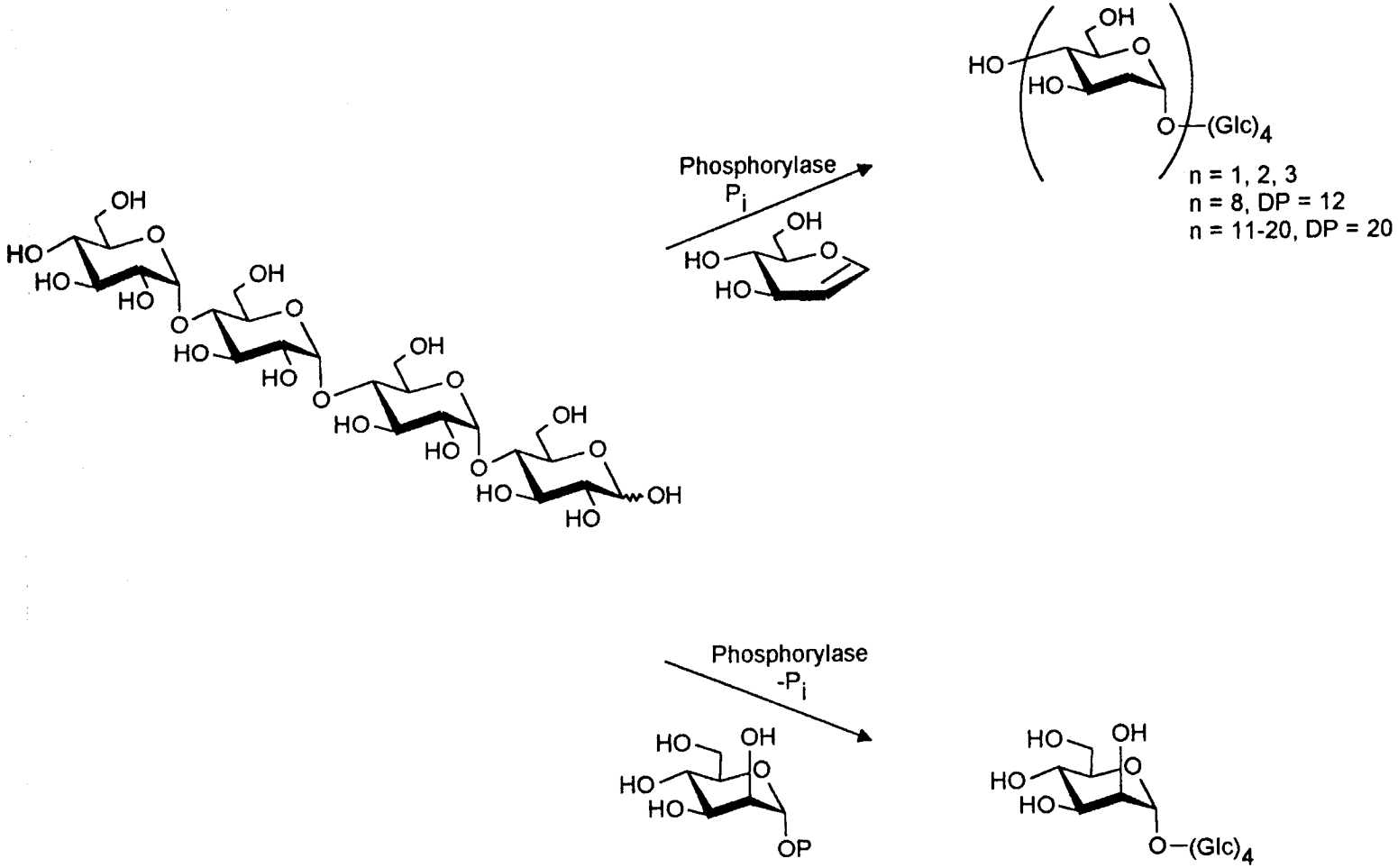









Phosphorylase
P_i
n = 1
+ $(Glc)_4$
Phosphorylase
$-P_i$
n = 2


Phosphorylase
P_i
n = 1, 2, 3
n = 8, DP = 12
n = 11-20, DP = 20
Phosphorylase
$-P_i$
$(Glc)_4$
OP