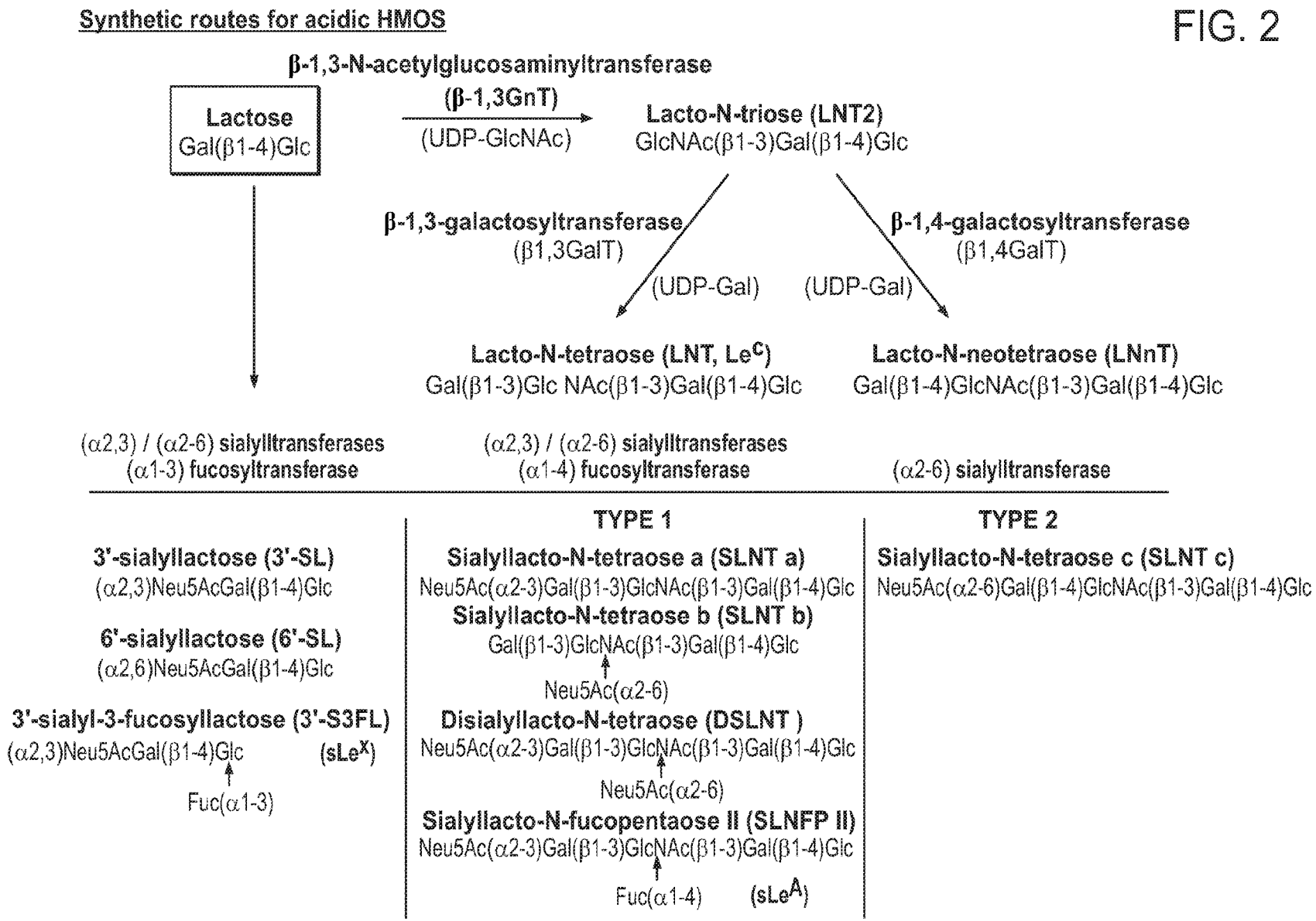
FIG. 2


Synthetic routes for acidic HMOS
Lactose
Gal(β1-4)Glc
β-1,3-N-acetylglucosaminyltransferase
(β-1,3GnT)
(UDP-GlcNAc)
Lacto-N-triose (LNT2)
GlcNAc(β1-3)Gal(β1-4)Glc
β-1,3-galactosyltransferase
(β1,3GalT)
(UDP-Gal)
β-1,4-galactosyltransferase
(β1,4GalT)
(UDP-Gal)
Lacto-N-tetraose (LNT, Le^C)
Gal(β1-3)Glc NAc(β1-3)Gal(β1-4)Glc
Lacto-N-neotetraose (LNnT)
Gal(β1-4)GlcNAc(β1-3)Gal(β1-4)Glc
(α2,3) / (α2-6) sialyltransferases
(α1-3) fucosyltransferase
(α2,3) / (α2-6) sialyltransferases
(α1-4) fucosyltransferase
(α2-6) sialyltransferase
3'-sialyllactose (3'-SL)
(α2,3)Neu5AcGal(β1-4)Glc
6'-sialyllactose (6'-SL)
(α2,6)Neu5AcGal(β1-4)Glc
3'-sialyl-3-fucosyllactose (3'-S3FL)
(α2,3)Neu5AcGal(β1-4)Glc (sLe^X)
Fuc(α1-3)
TYPE 1
Sialyllacto-N-tetraose a (SLNT a)
Neu5Ac(α2-3)Gal(β1-3)GlcNAc(β1-3)Gal(β1-4)Glc
Sialyllacto-N-tetraose b (SLNT b)
Gal(β1-3)GlcNAc(β1-3)Gal(β1-4)Glc
Neu5Ac(α2-6)
Disialyllacto-N-tetraose (DSLNT)
Neu5Ac(α2-3)Gal(β1-3)GlcNAc(β1-3)Gal(β1-4)Glc
Neu5Ac(α2-6)
Sialyllacto-N-fucopentaose II (SLNFP II)
Neu5Ac(α2-3)Gal(β1-3)GlcNAc(β1-3)Gal(β1-4)Glc
Fuc(α1-4) (sLe^A)
TYPE 2
Sialyllacto-N-tetraose c (SLNT c)
Neu5Ac(α2-6)Gal(β1-4)GlcNAc(β1-3)Gal(β1-4)Glc