

FIG. 1A

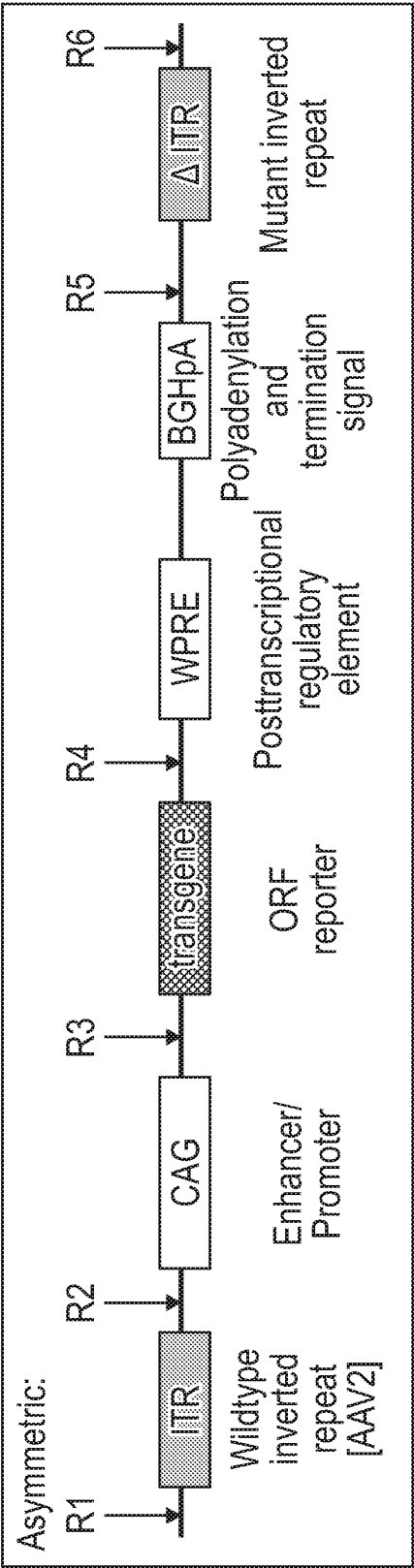


FIG. 1B

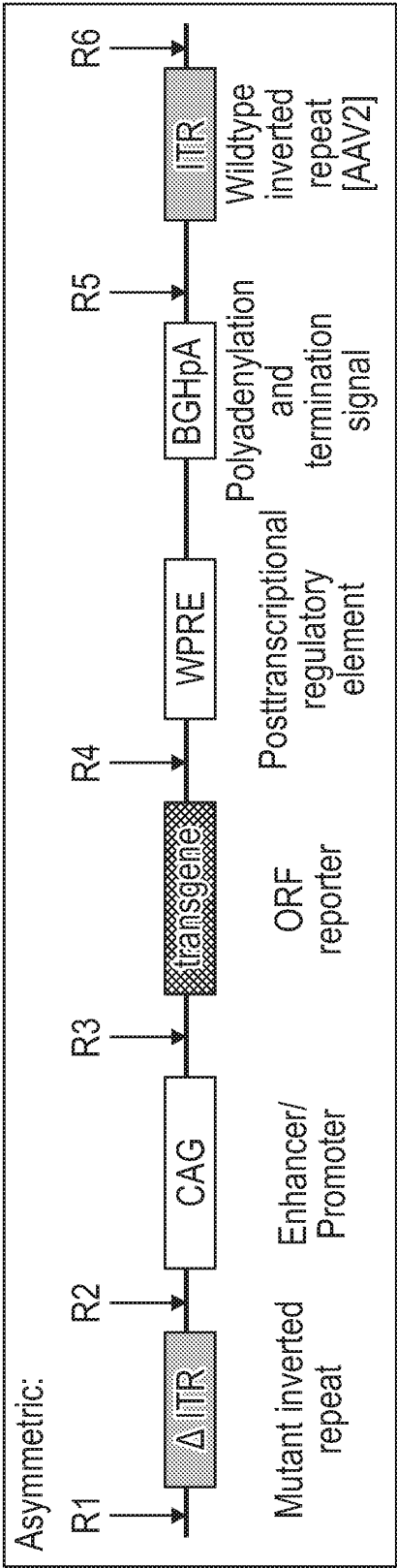
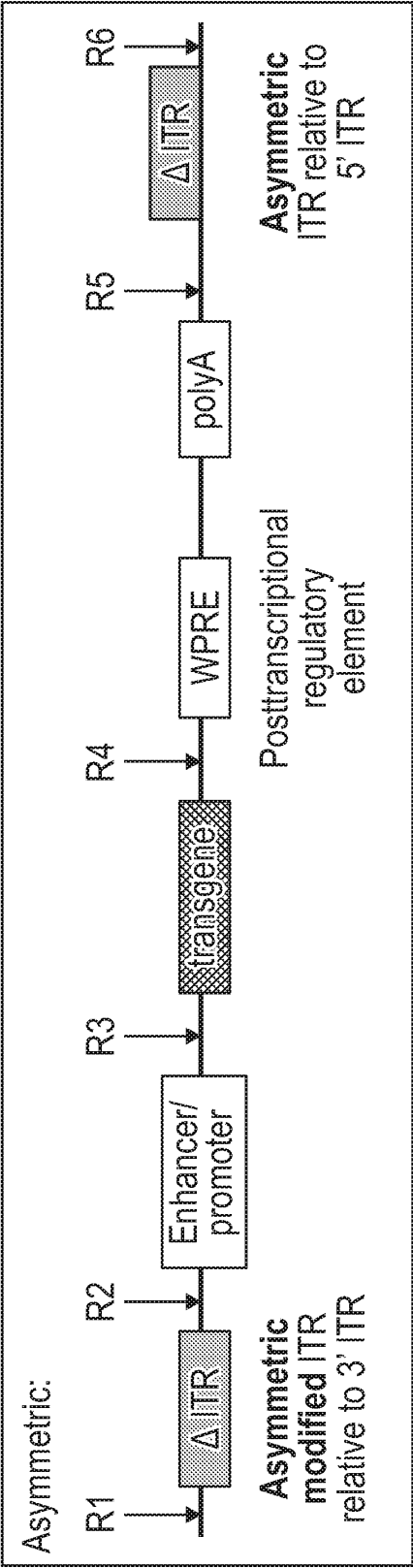


FIG. 1C



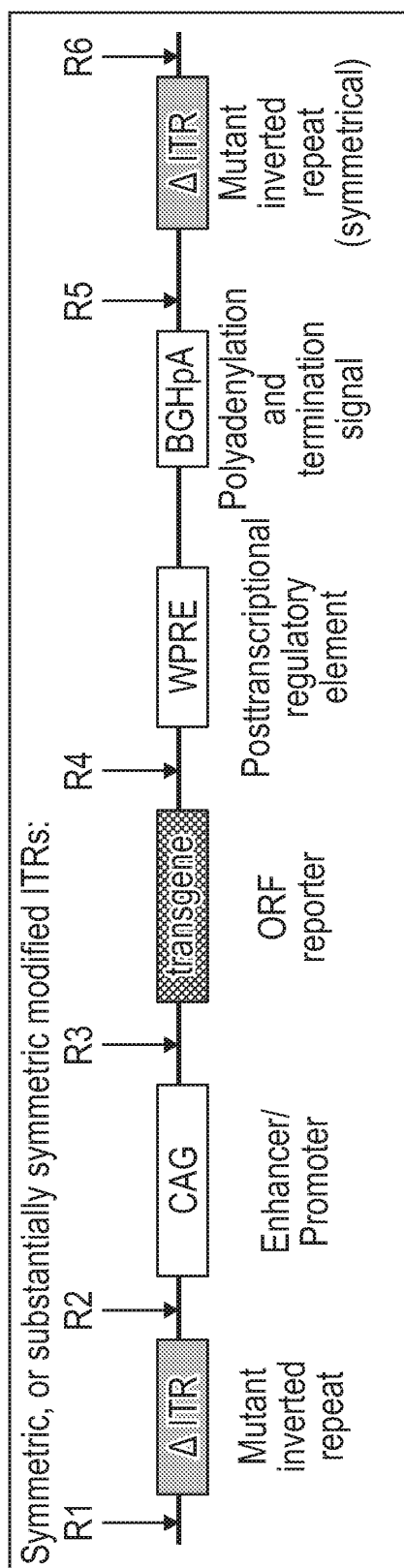
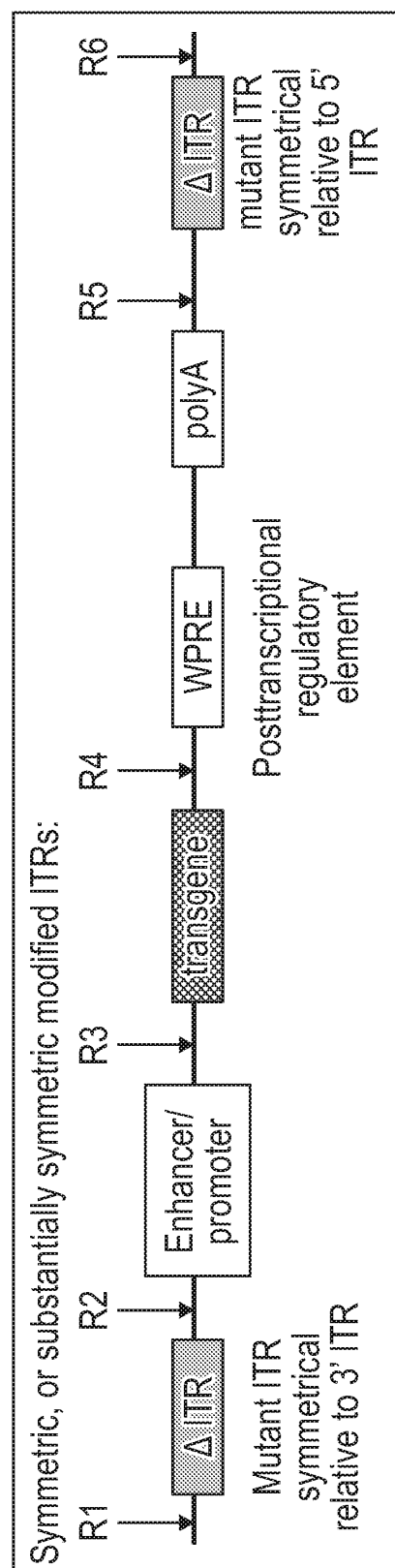


FIG. 1F

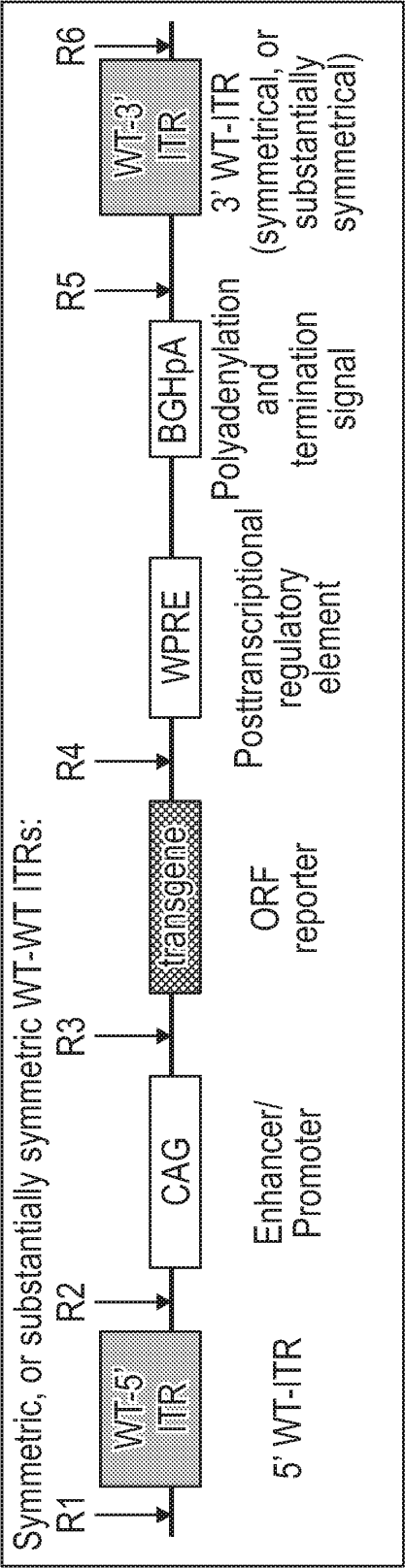
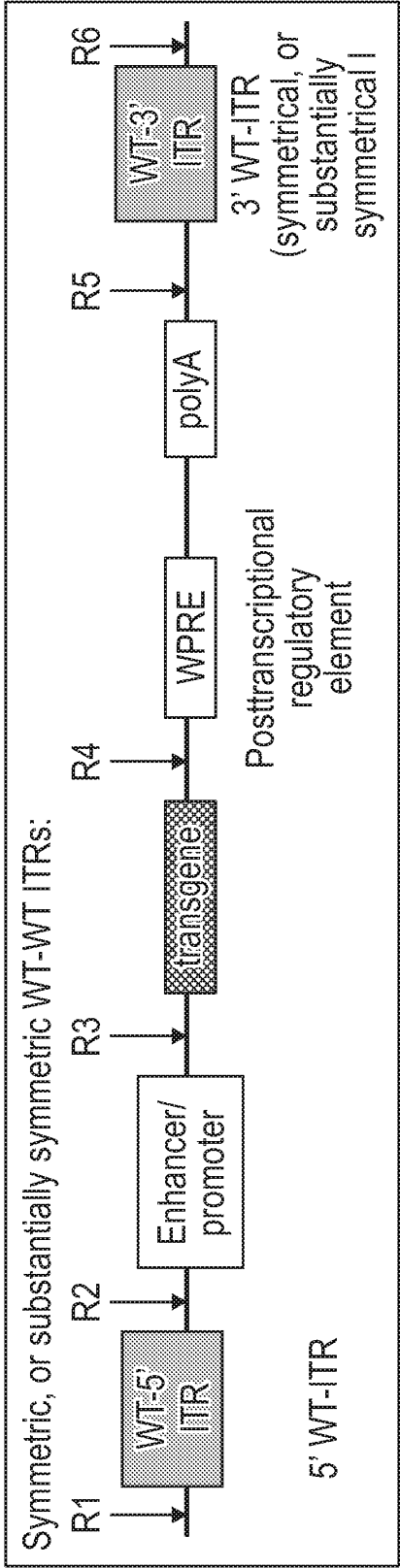


FIG. 1G



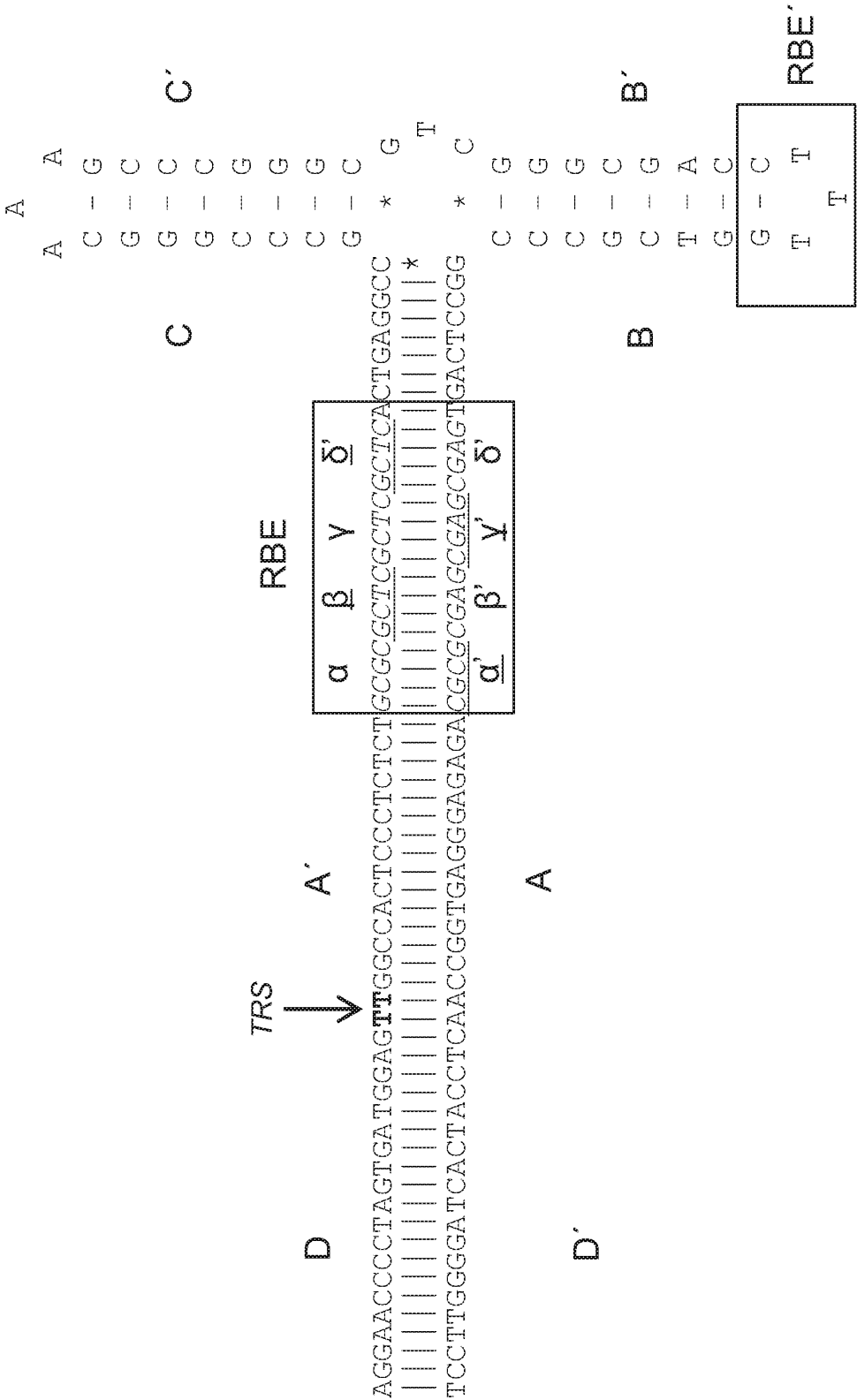
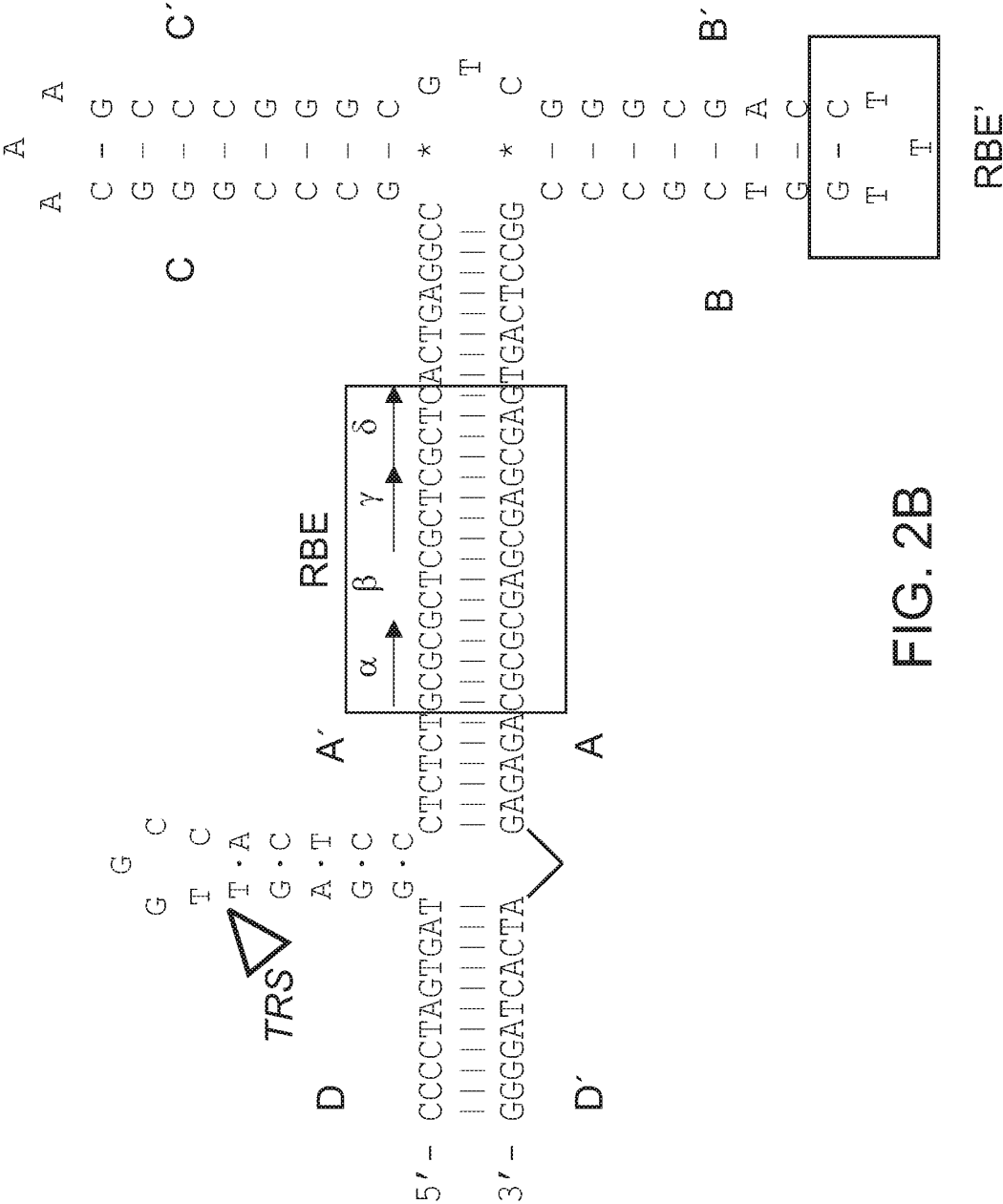
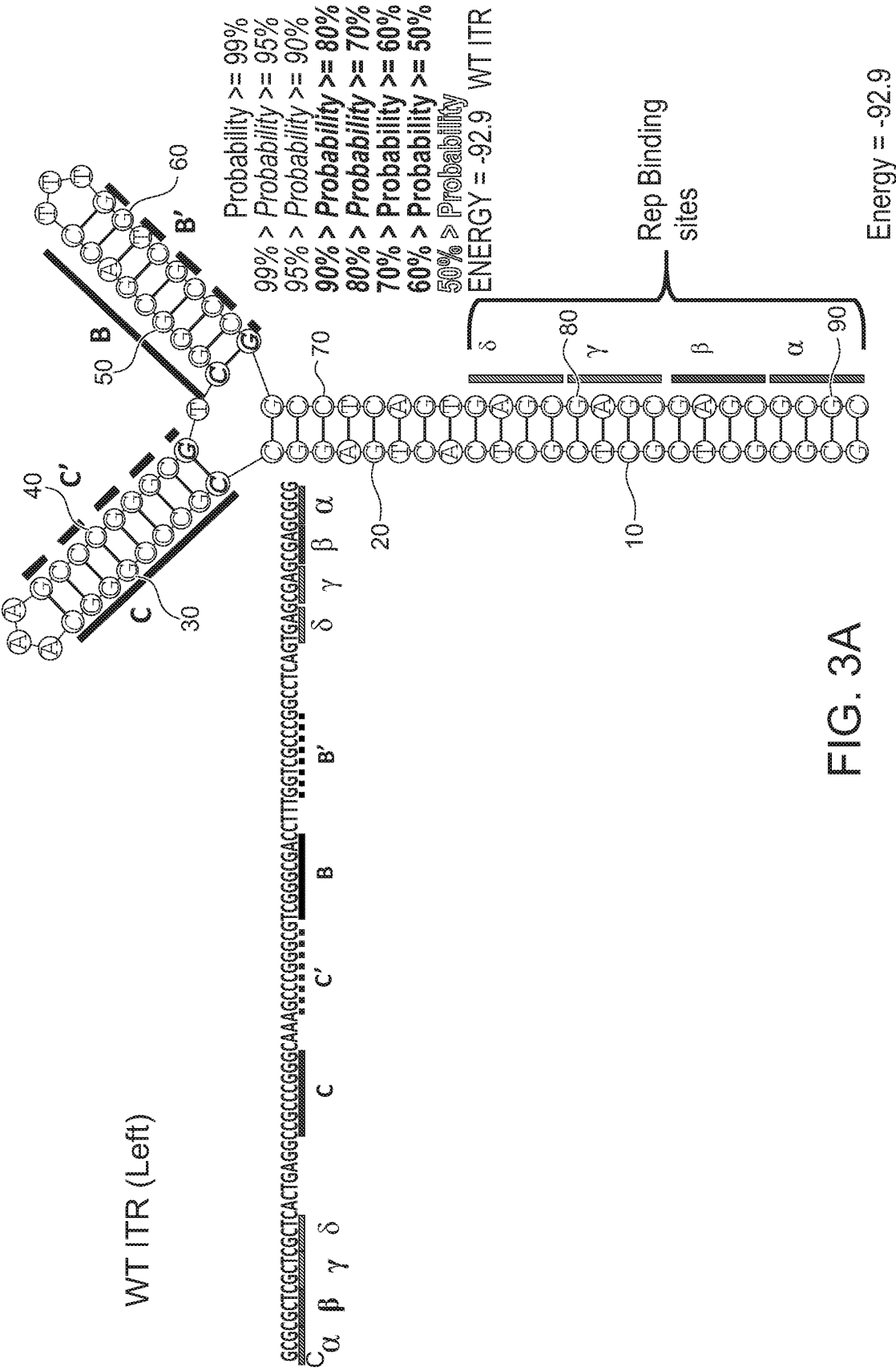
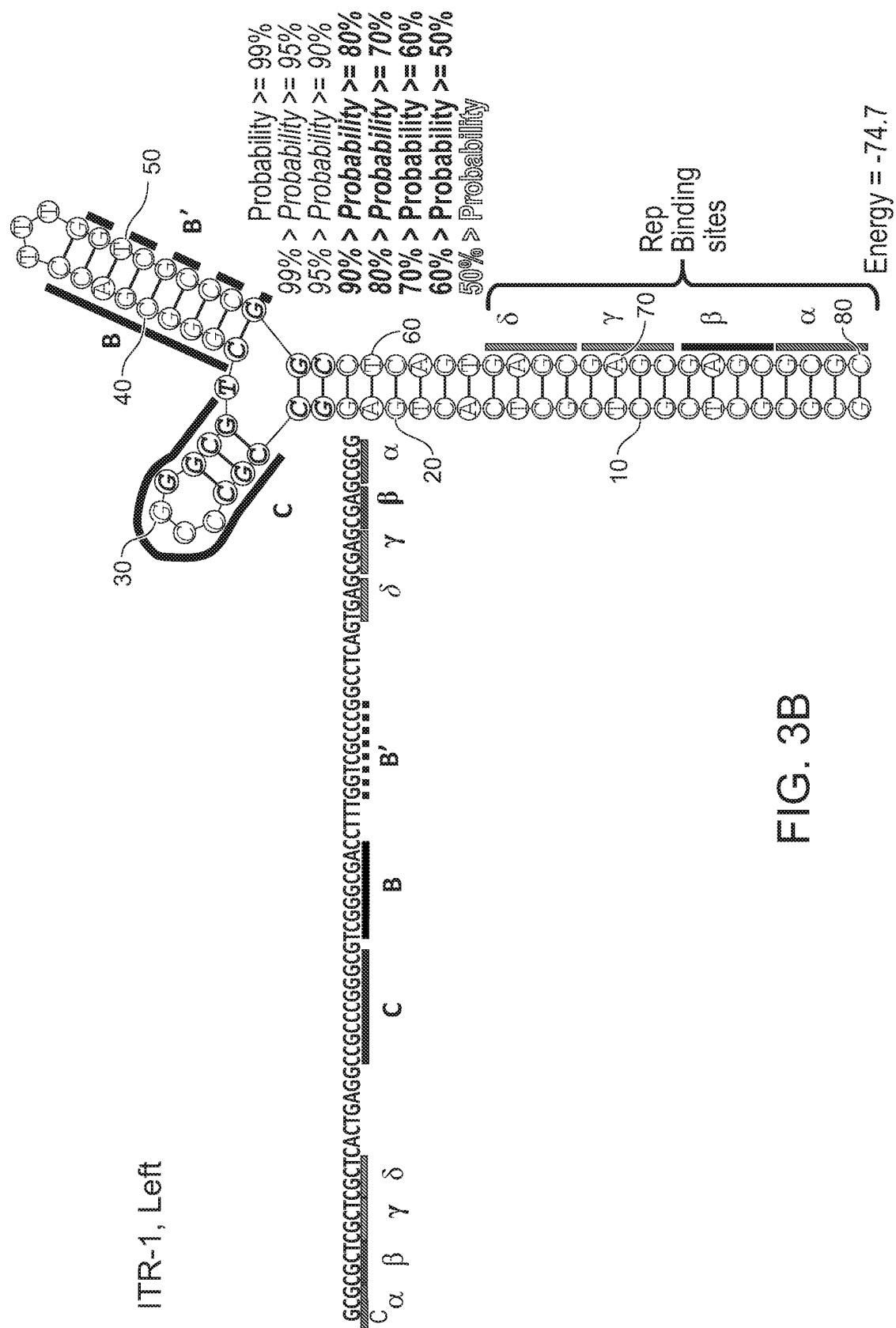


FIG. 2A







30

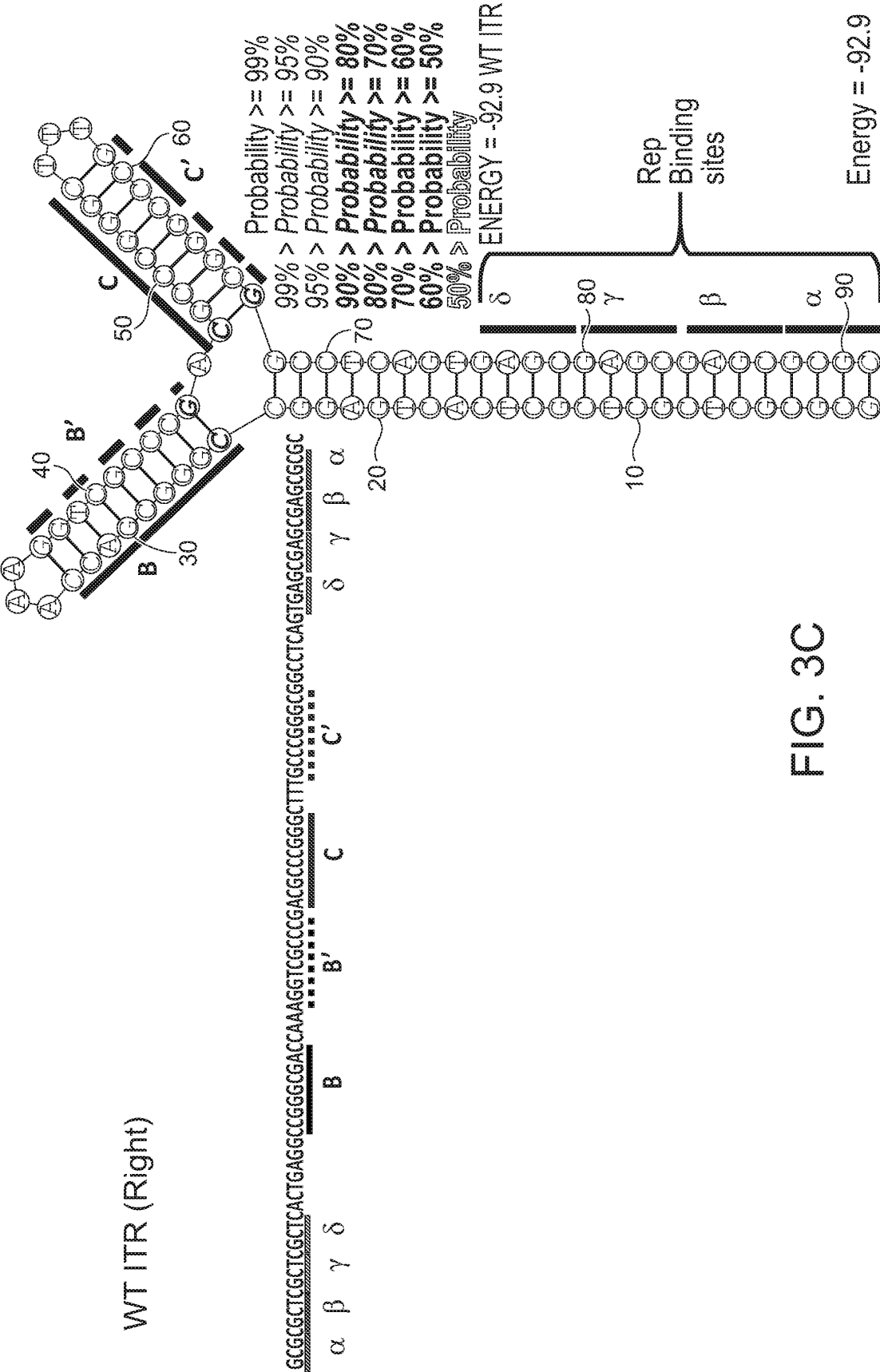
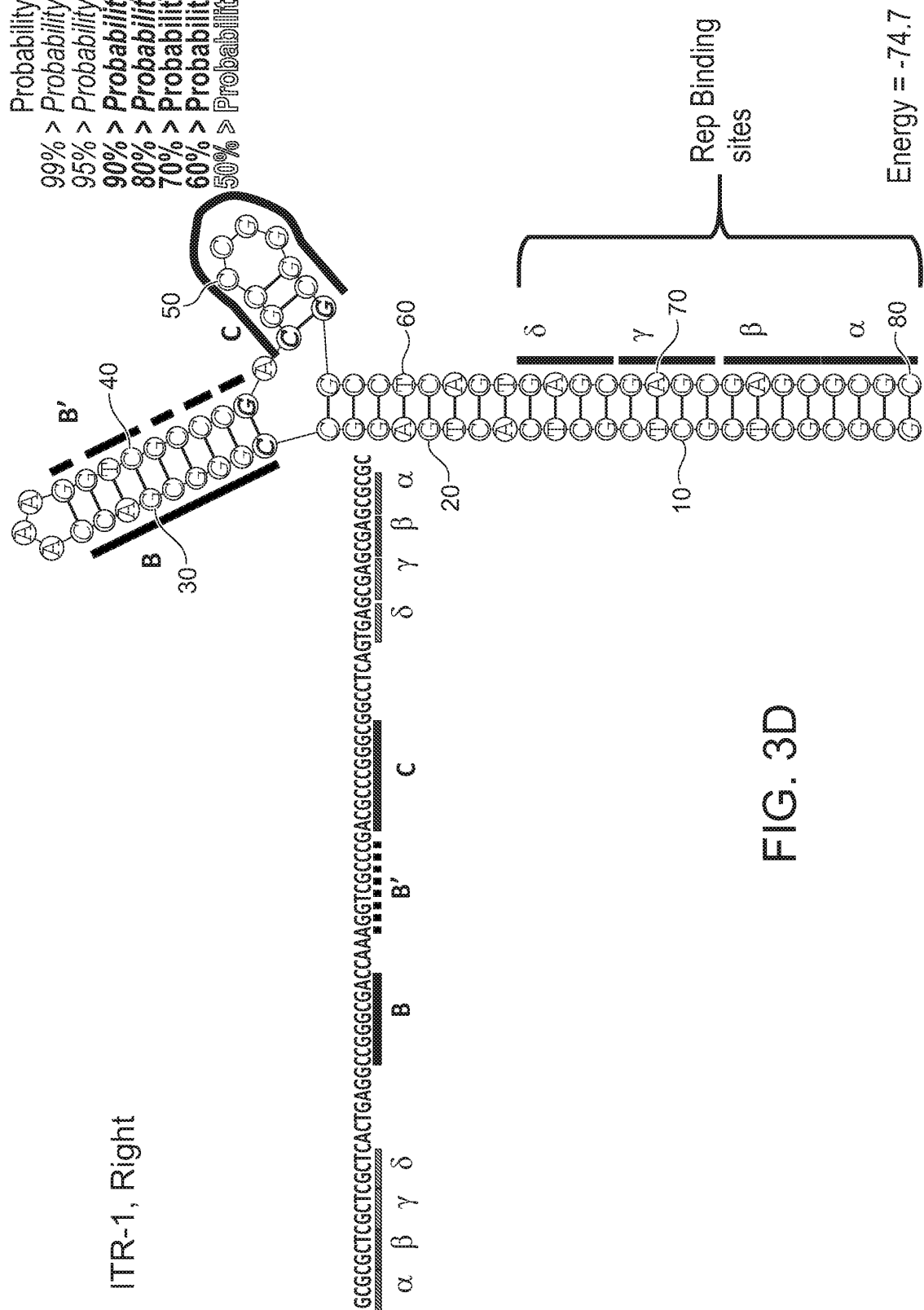


FIG. 3C

Probability >= 99%
99% > Probability >= 95%
95% > Probability >= 90%
90% > Probability >= 80%
80% > Probability >= 70%
70% > Probability >= 60%
60% > Probability >= 50%
50% > Probability

TR-1, Right



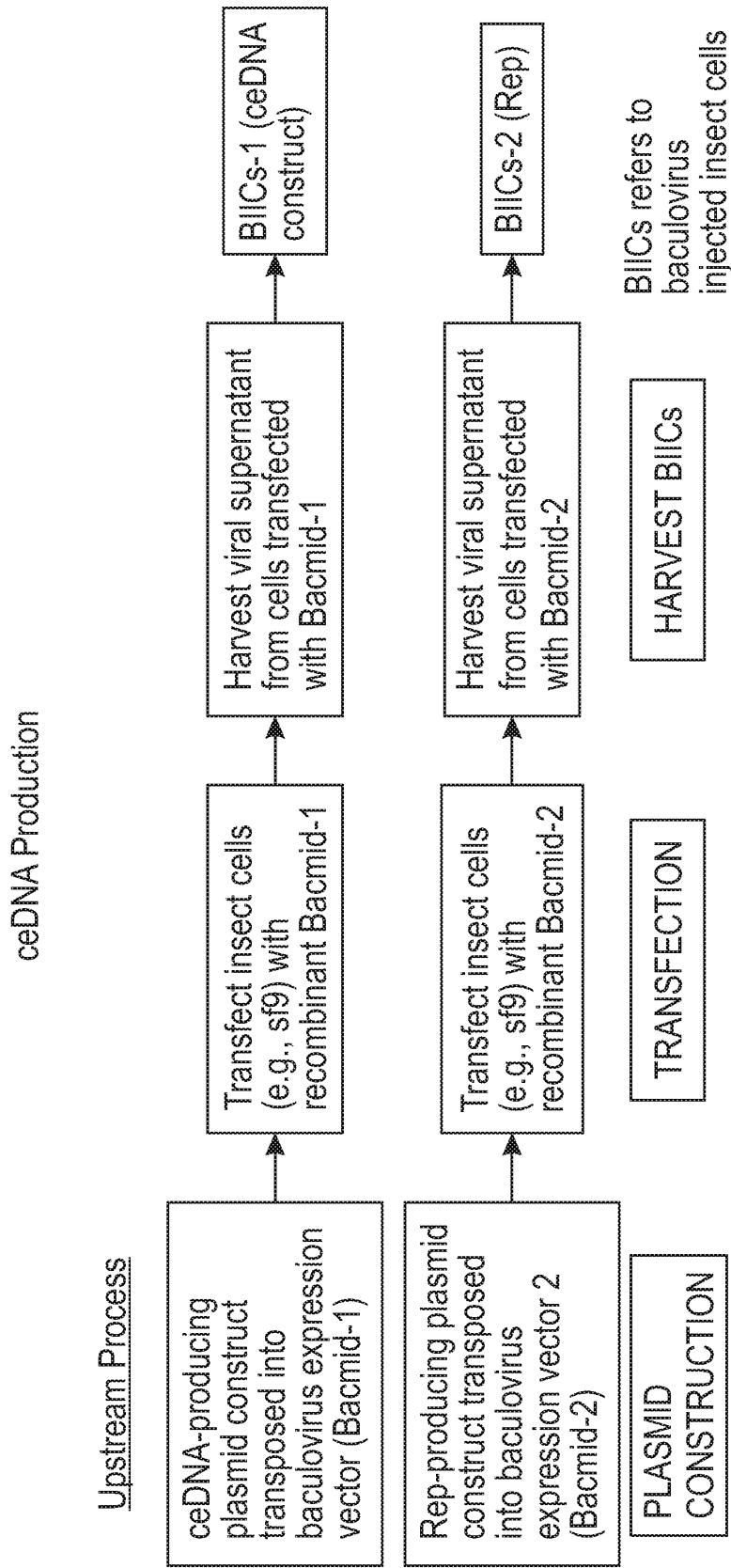


FIG. 4A

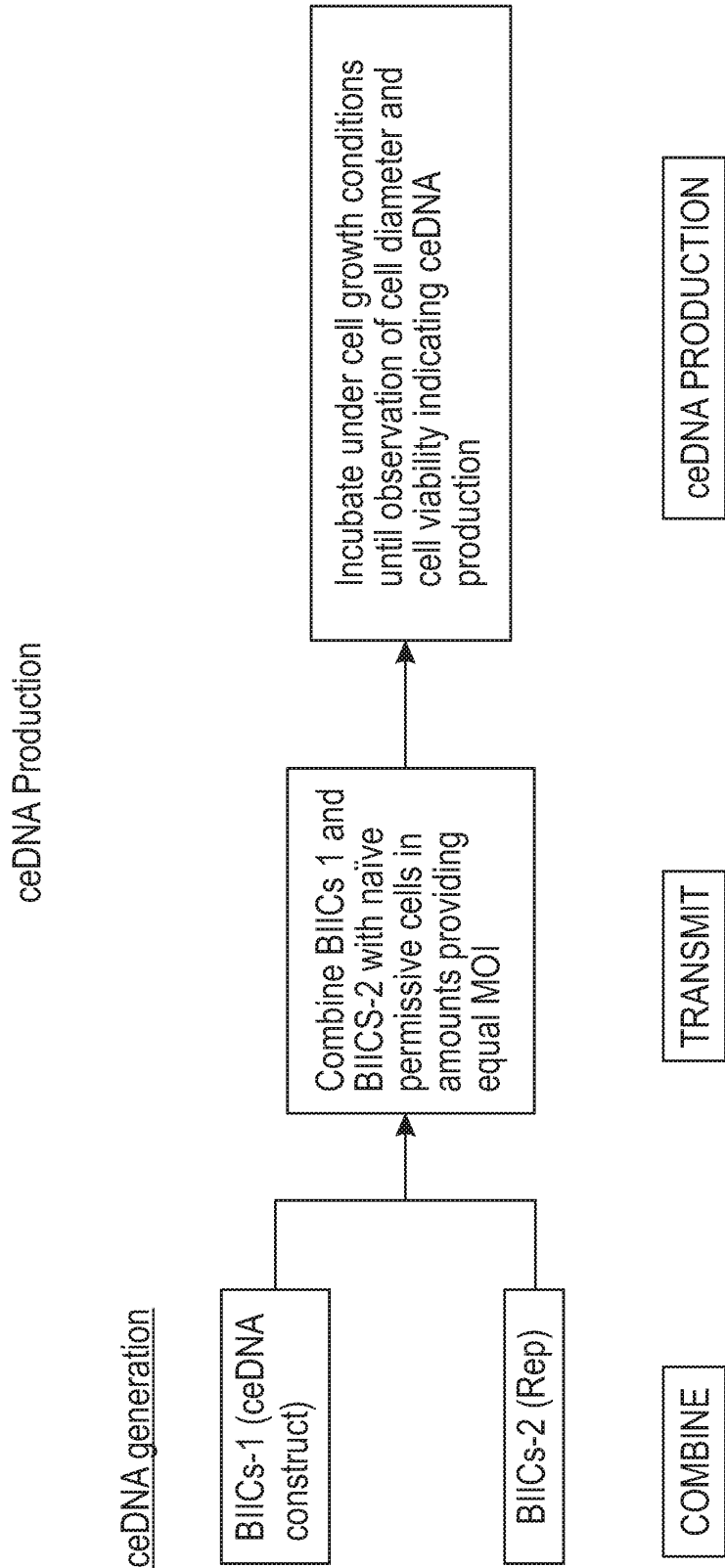


FIG. 4B

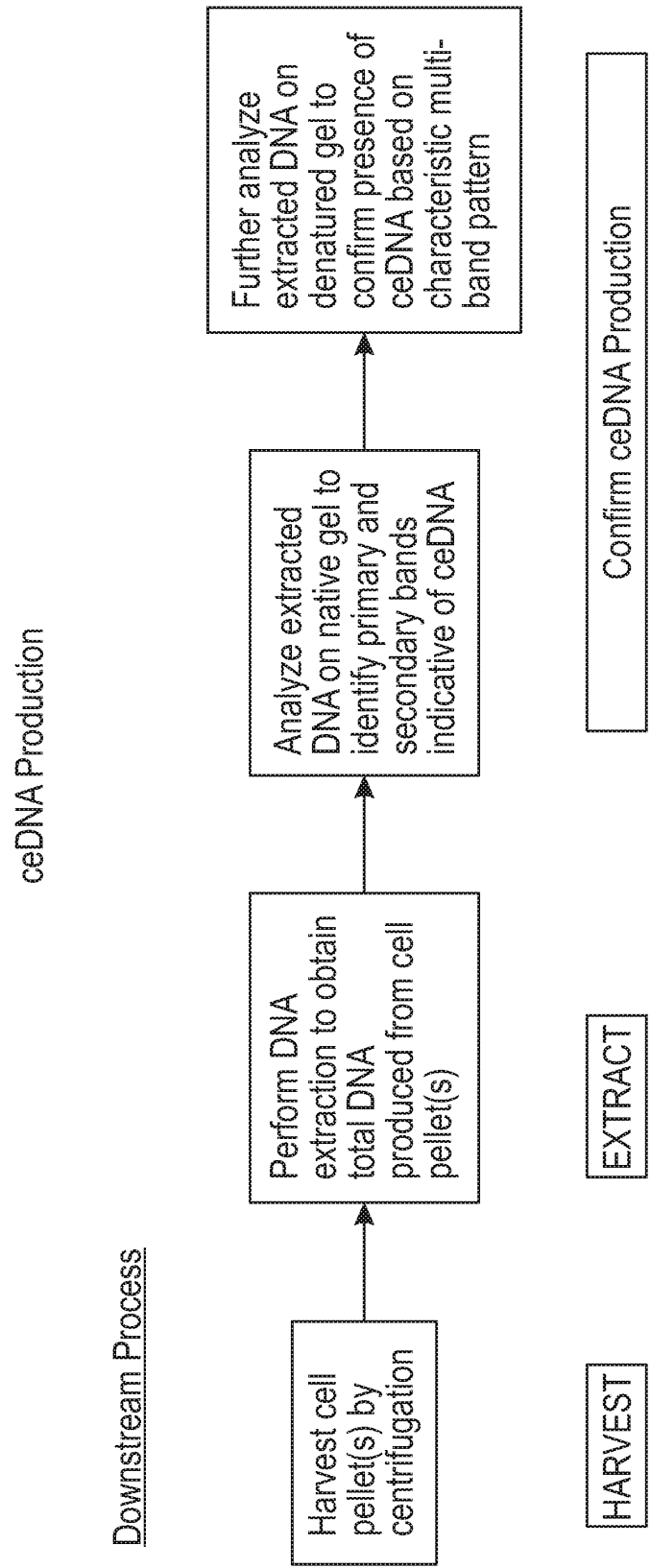


FIG. 4C

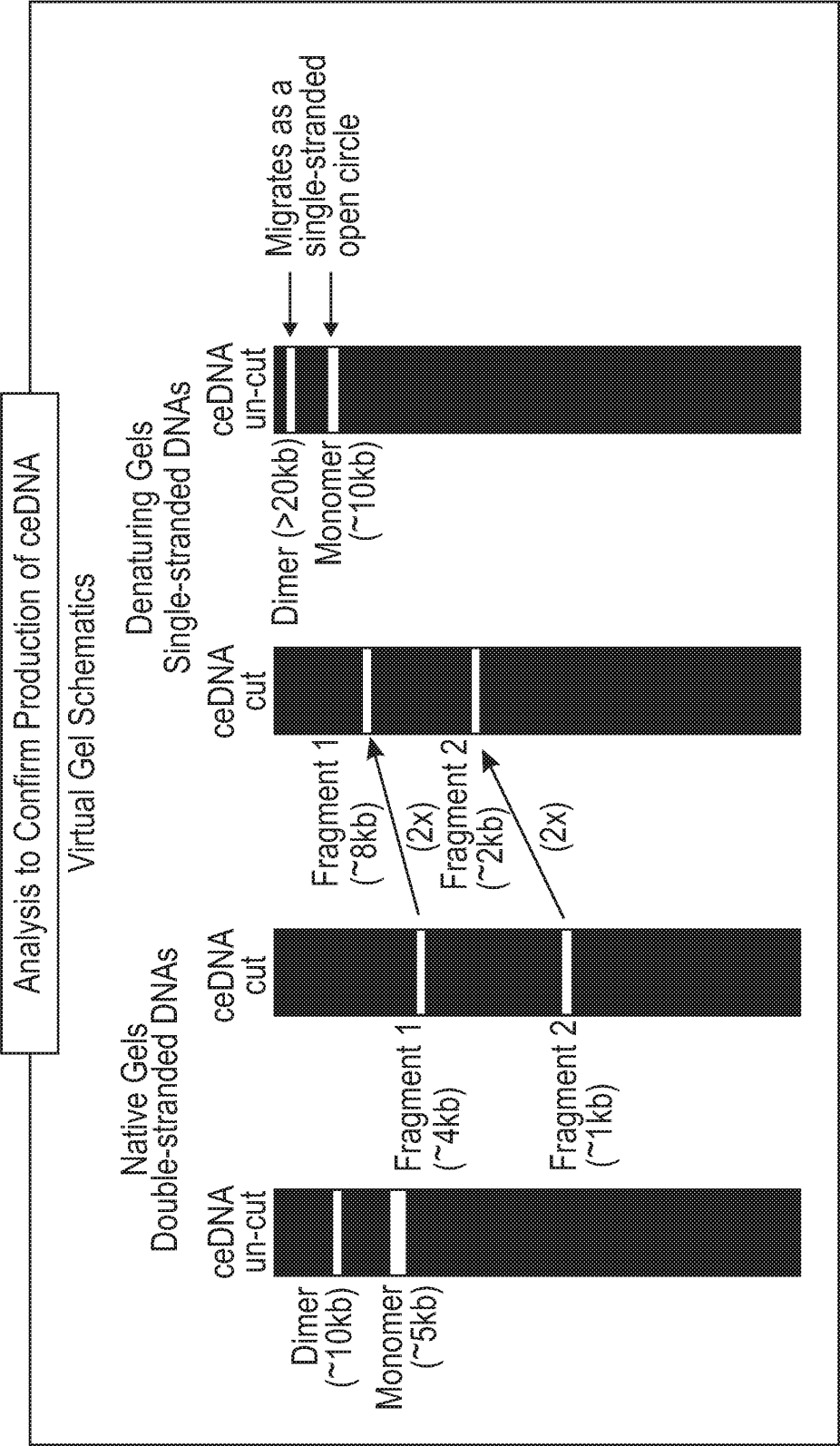


FIG. 4D

FIG. 4E

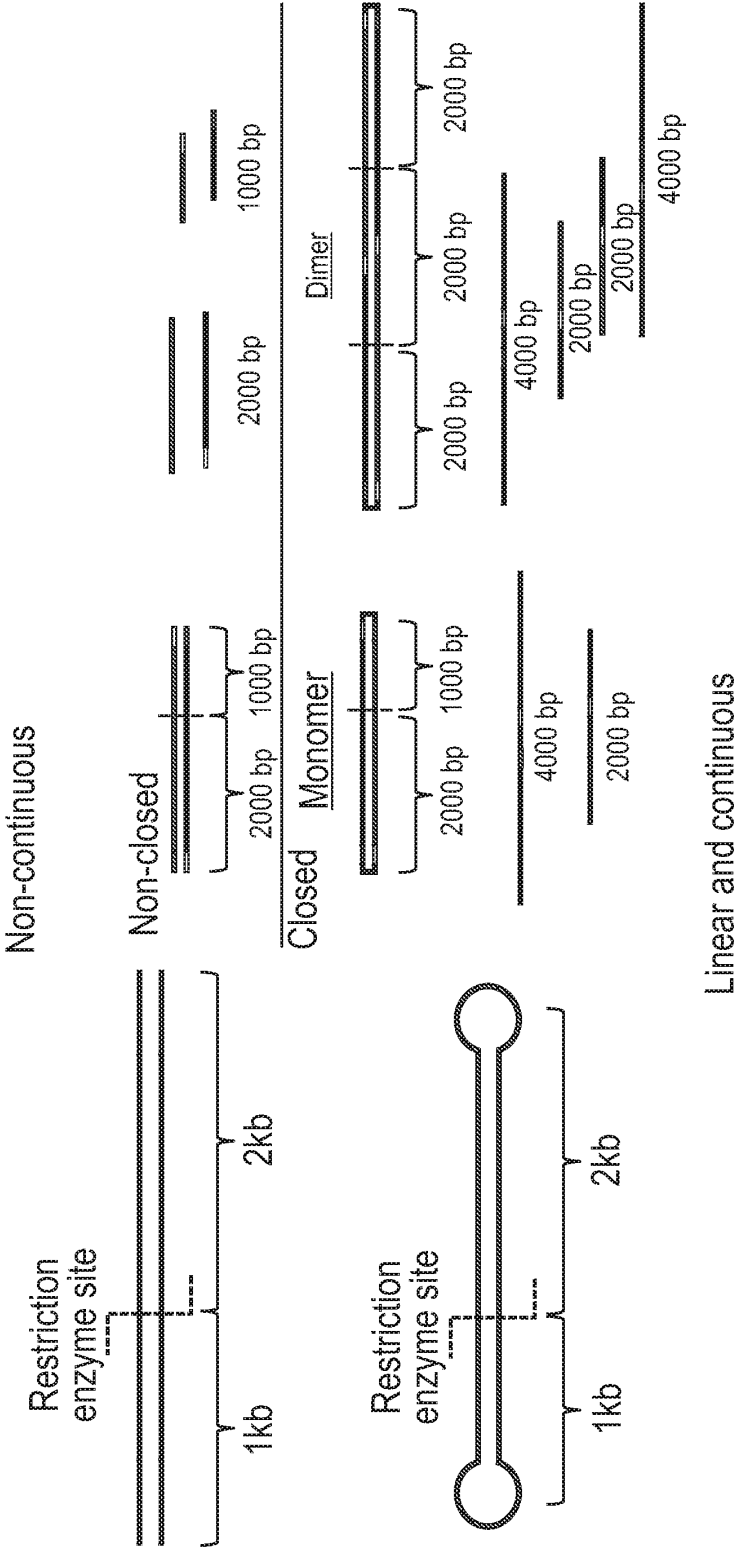
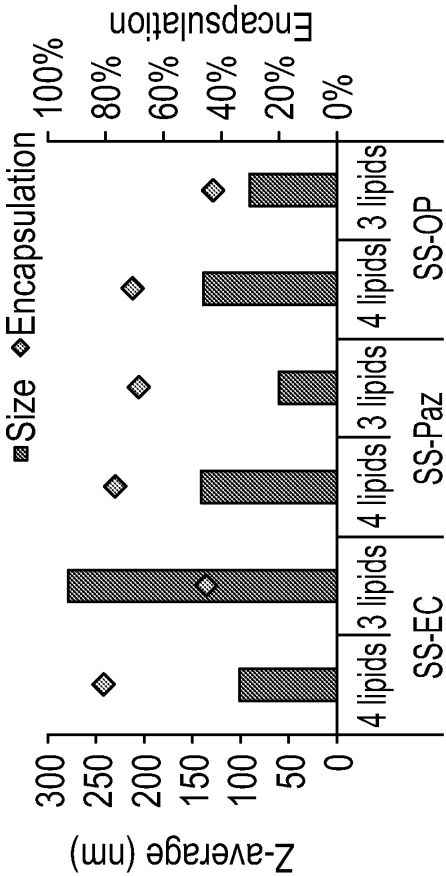


FIG. 5



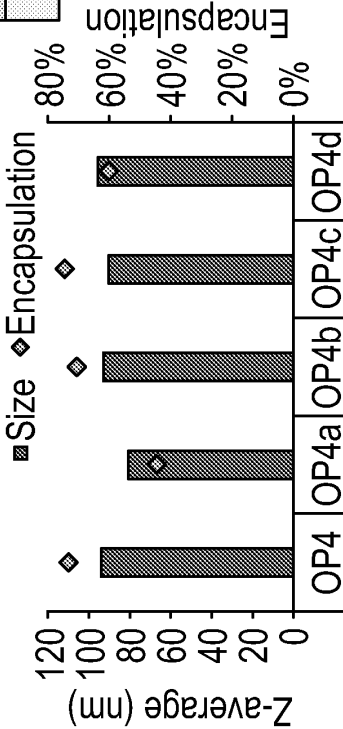
	ssPaz3	ssPaz4	ssOP3	ssOP4
1PZ-21	70	52.5	70	52.5
DOPC	0	7.5	0	7.5
Cholesterol	30	40	30	40
DMG-PEG ₂₀₀₀	3	3	3	3

Effects of non-cationic lipid

FIG. 6A

	ssOP4	ssOP4a	ssOP4b	ssOP4c	ssOP4d
SS-OP	52.5	52.5	50	50	50
DOPC	7.5	7.5	10		
DSPC				10	
DOPE					10
Cholesterol	40	40	38.5	38.5	38.5
PEG ₂₀₀₀ -DMG	3	3	1.5	1.5	1.5

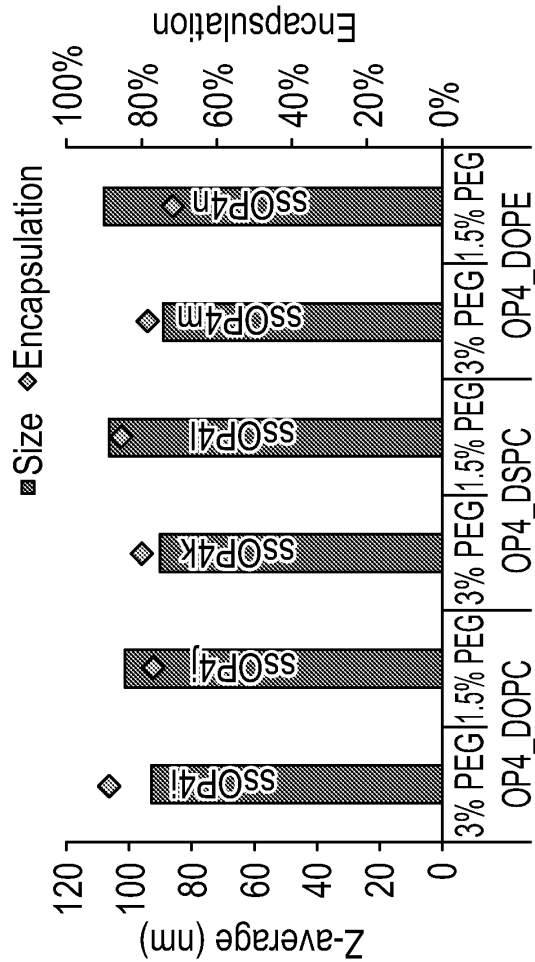
Effects of pH (pH 4)



Formulation Parameters	Formulation A	Formulation B
TFR (mL/min)	12	12
Buffer	25 mM NaAc (pH 4.0)	20 mM Malic Acid, 40 mM NaCl (pH 4.0)
ceDNA:Lipid Injection ratio	3:1	3:2
ceDNA conc. For injection	0.115 mg/mL	0.100 mg/mL
N/P	8	6

Effects of pH (pH 3)

FIG. 6B



	ssOP4i	ssOP4j	ssOP4k	ssOP4l	ssOP4m	ssOP4n
SS-OP	52.5	52.5	50	50		
DOPC	7.5	7.5				
DSPE			7.5	7.5		
DOPE					7.5	7.5
Cholesterol	40	40	40	40	40	40
PEG ₂₀₀₀ -DMG	3	1.5	3	1.5	3	1.5

FIG. 7

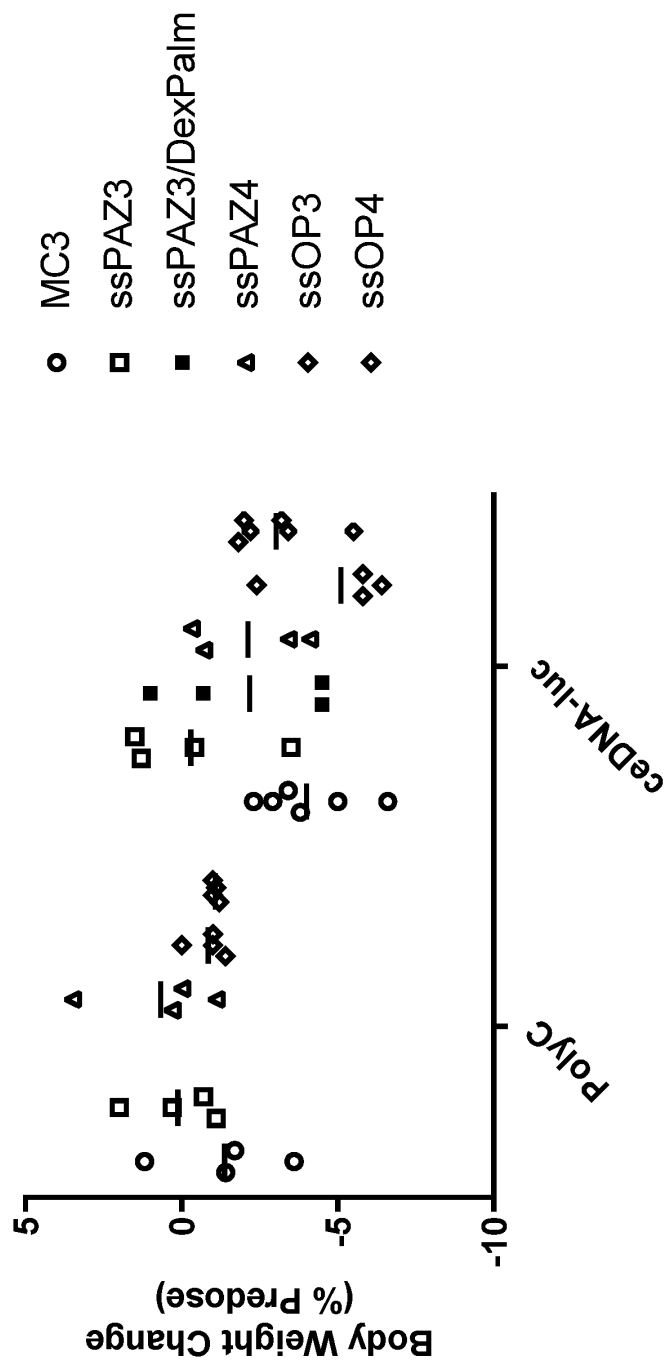


FIG. 8

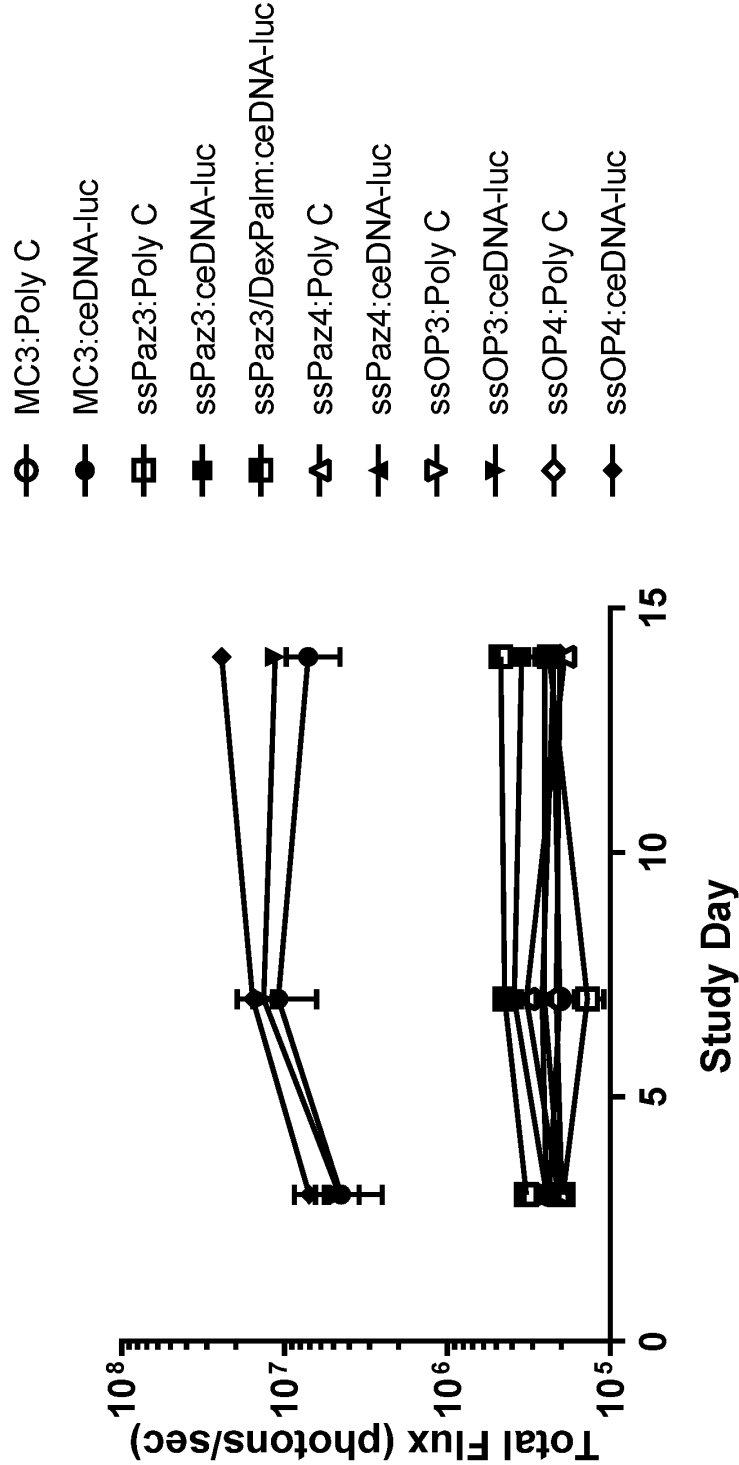


FIG. 9

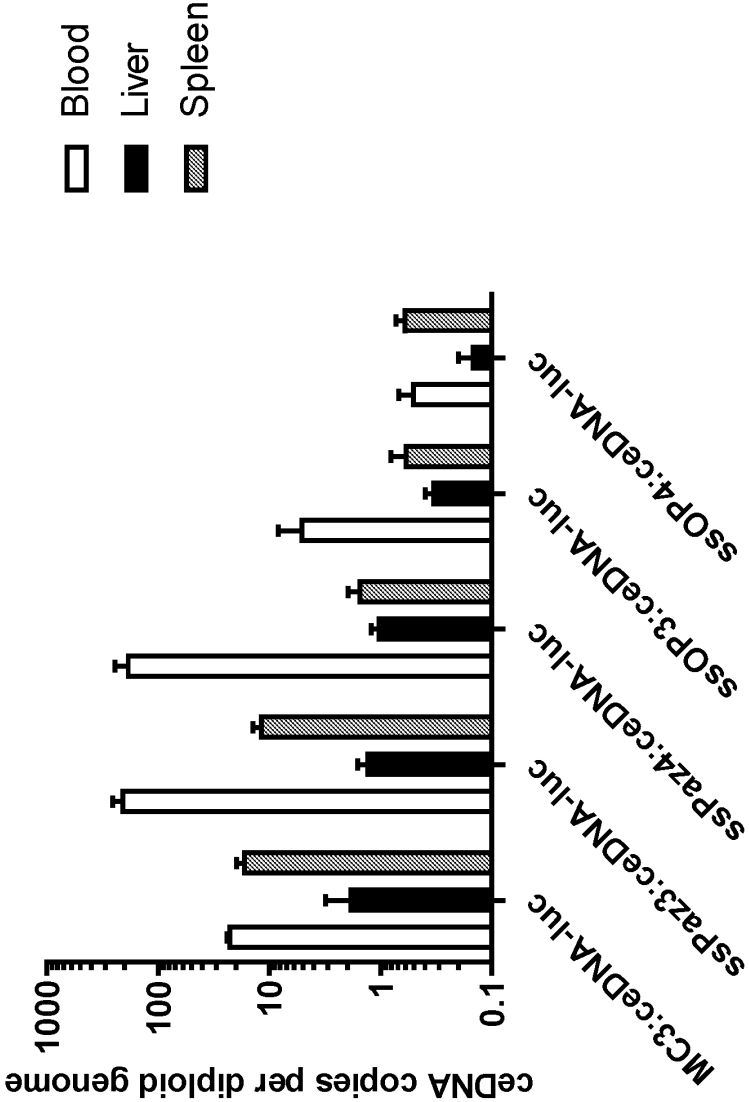


FIG. 10A

SUBSTITUTE SHEET (RULE 26)

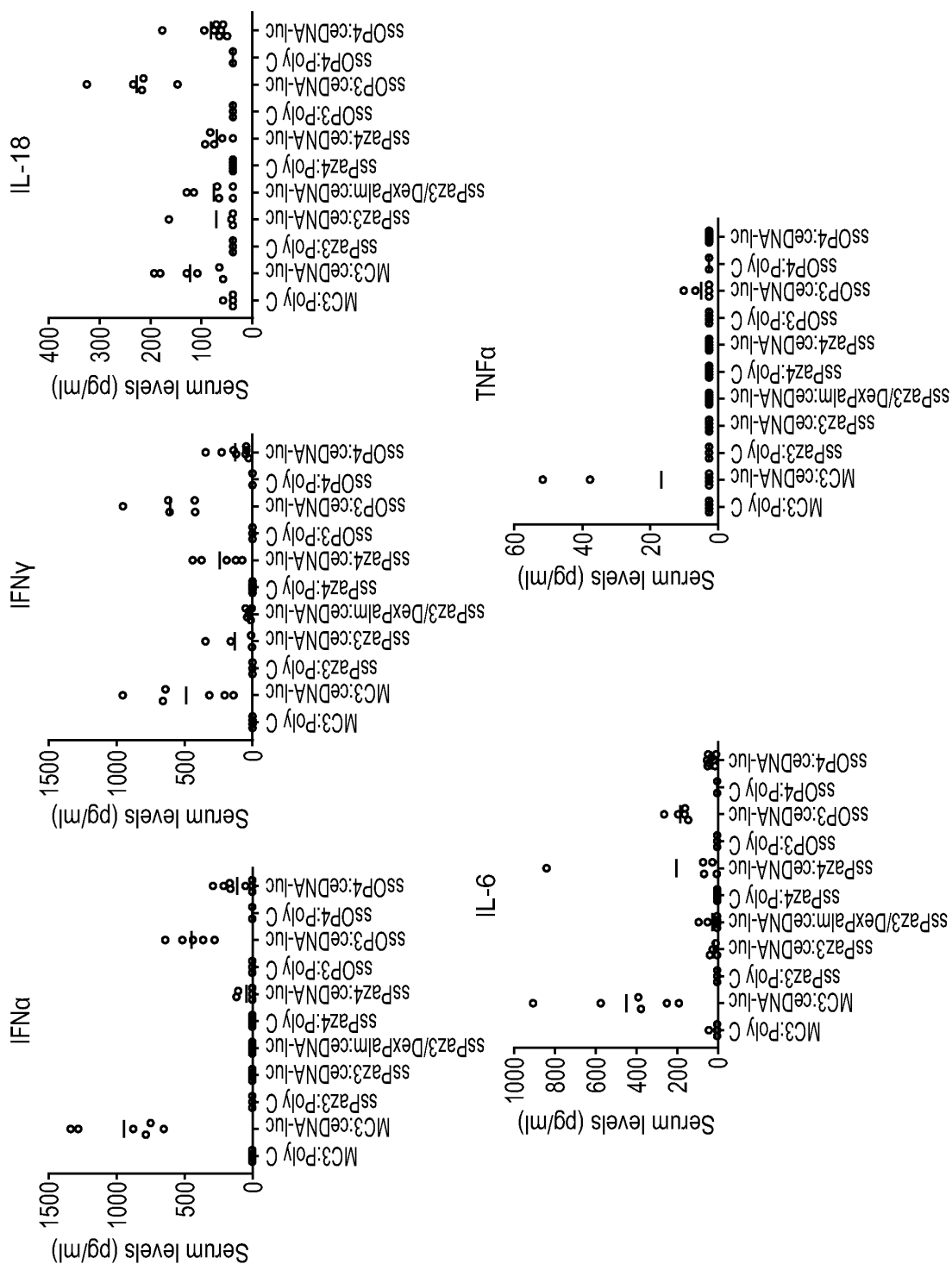


FIG. 10B

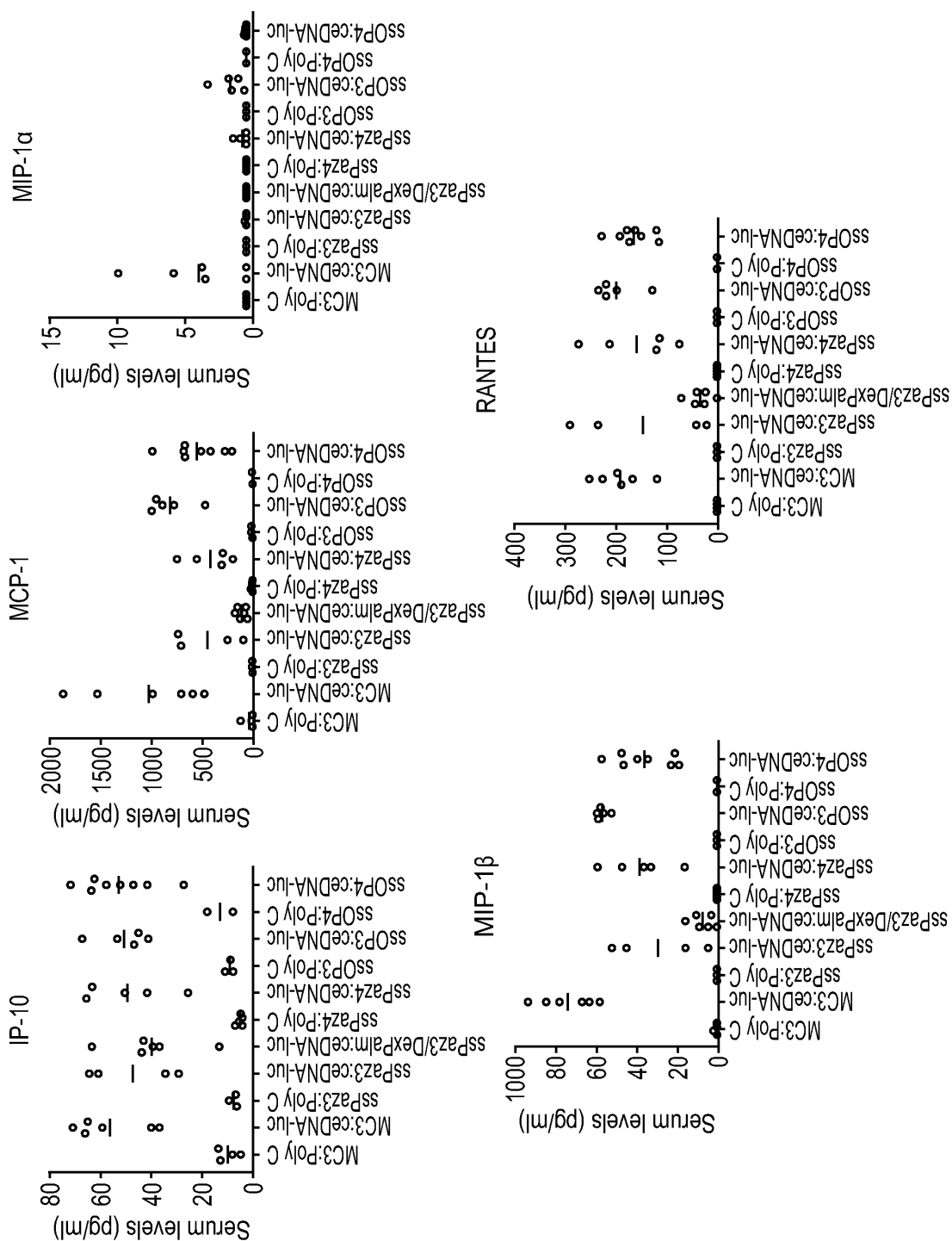


FIG. 11

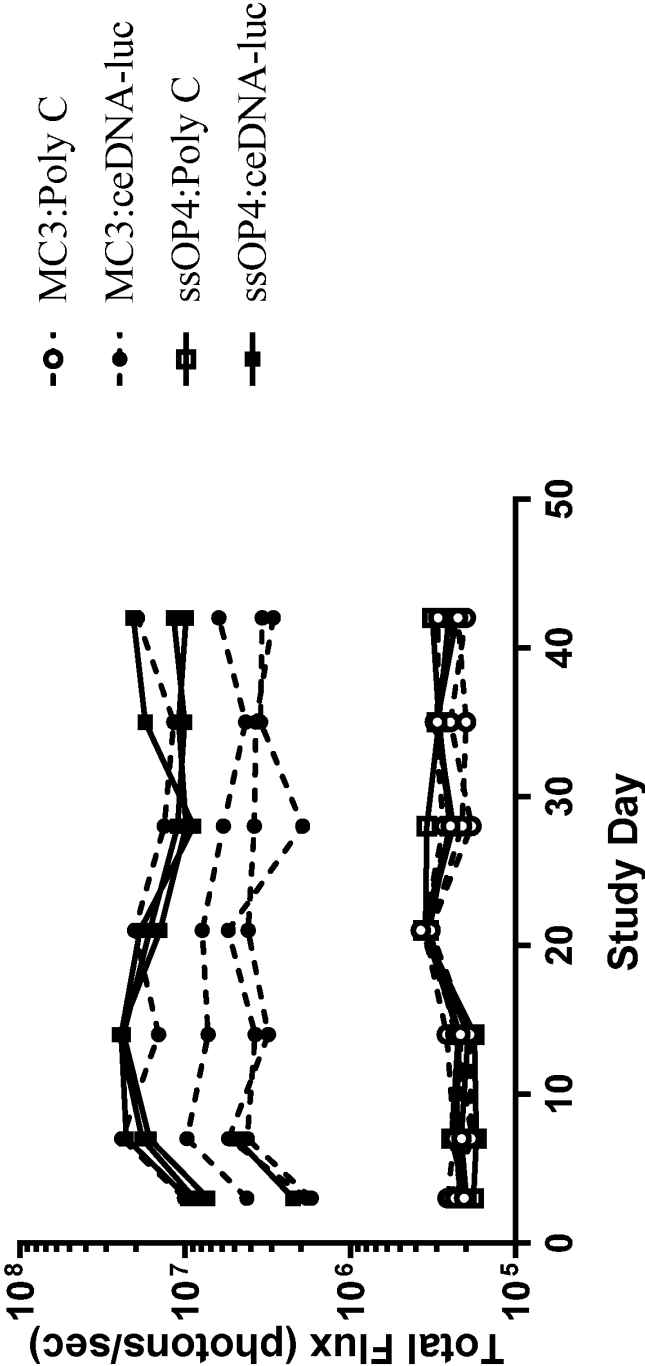


FIG. 12A

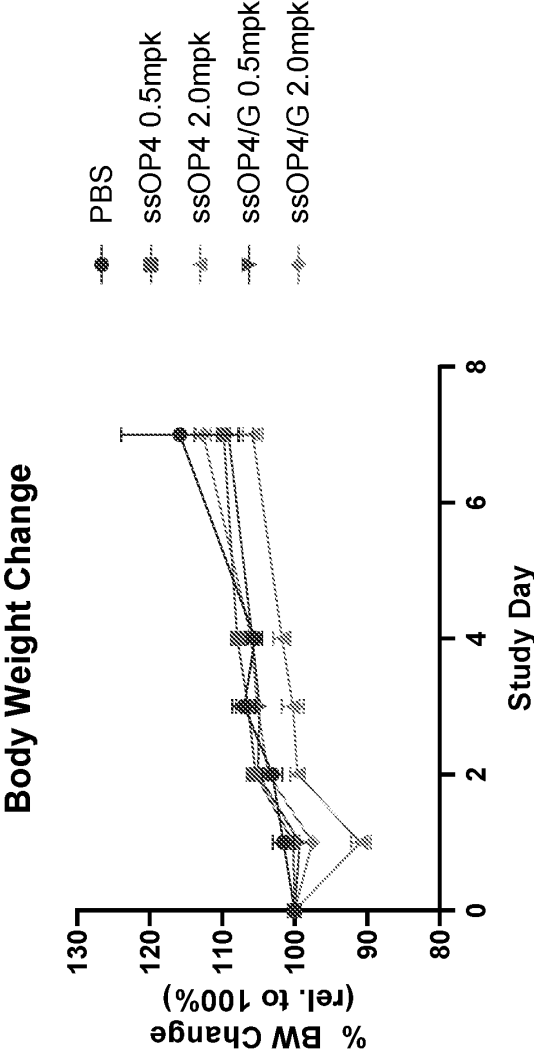
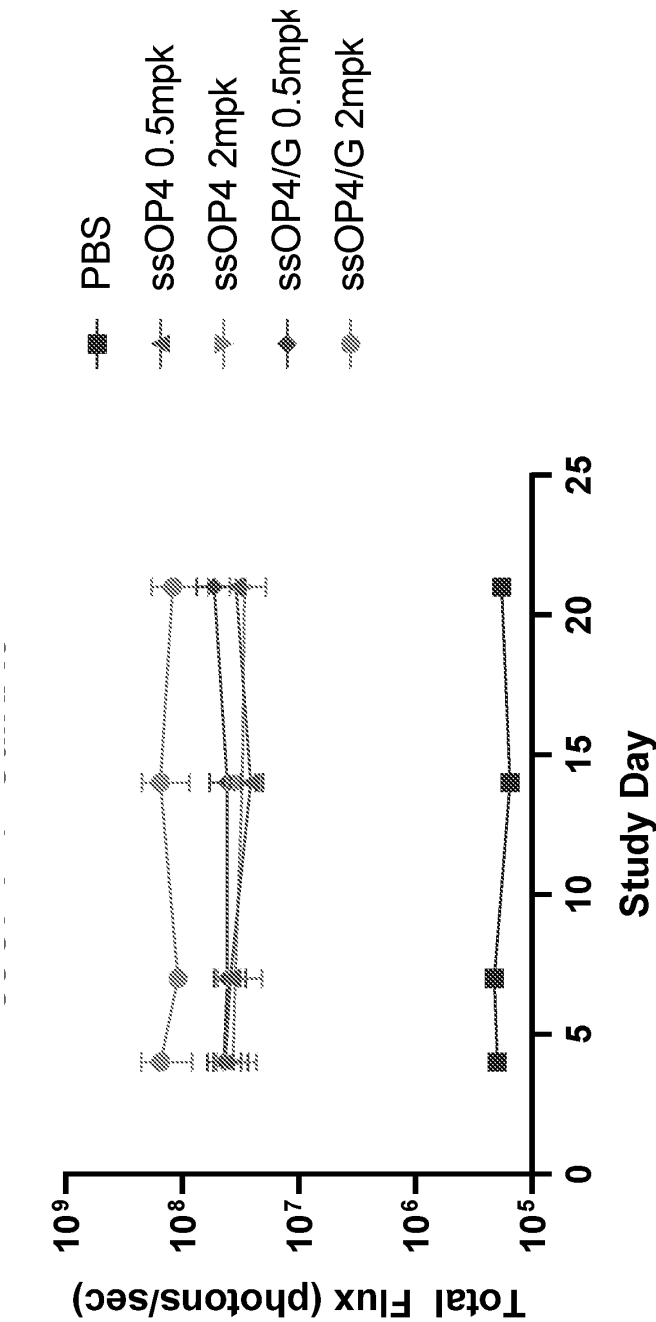


FIG. 12B



G= GalNAc (0.5% molar ratio)

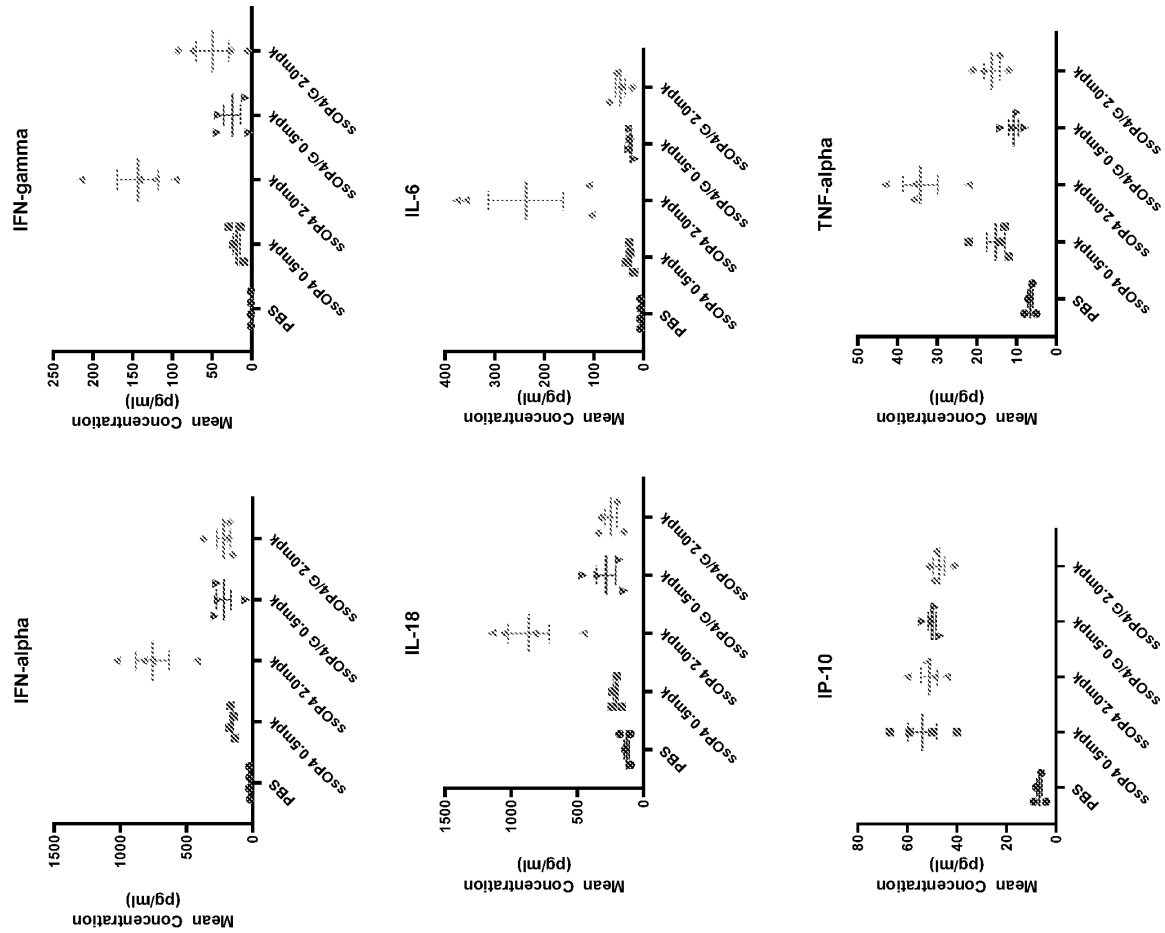
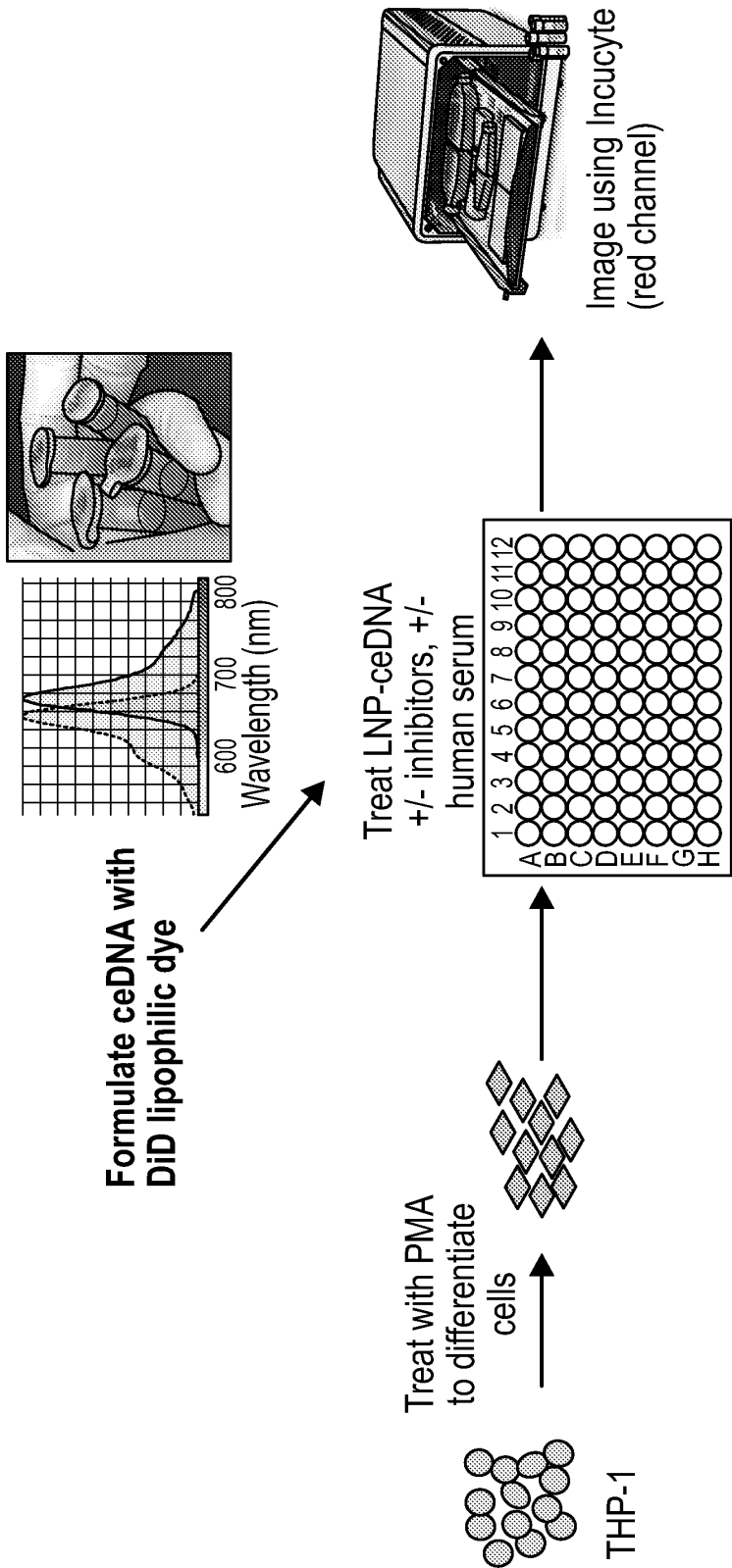


FIG. 13

FIG. 14



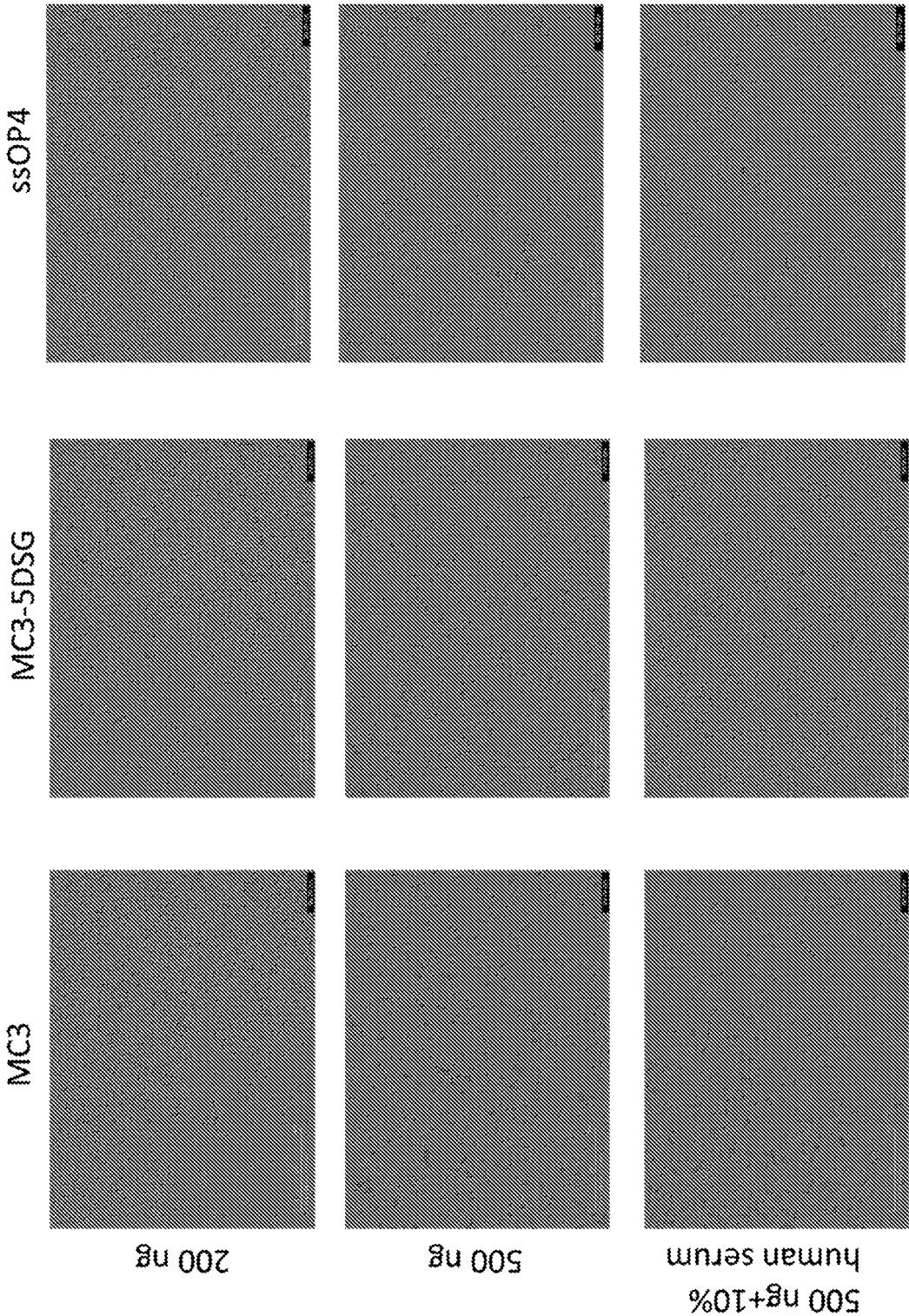


FIG. 15

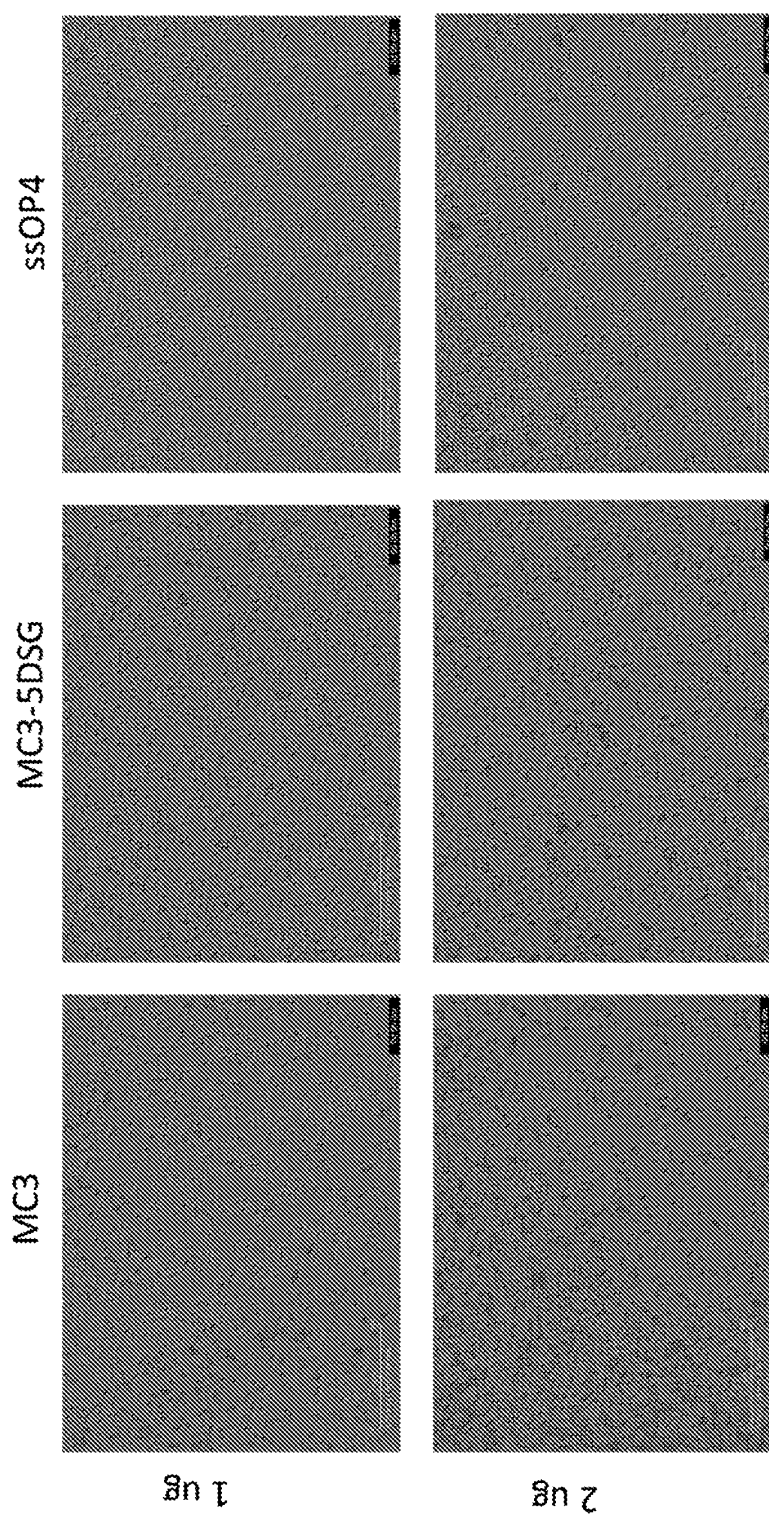
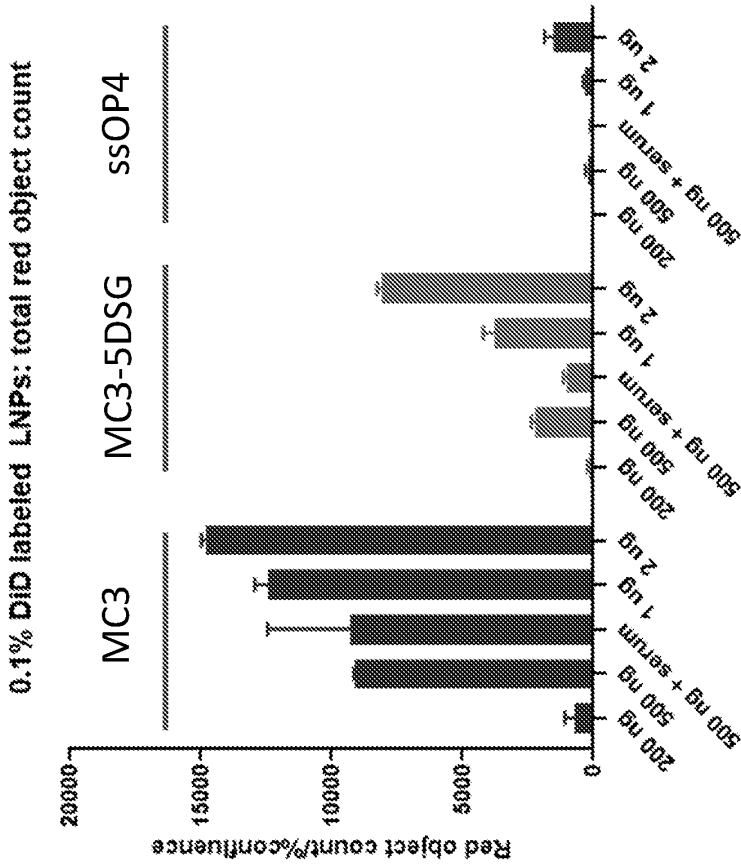


FIG. 16

FIG. 17



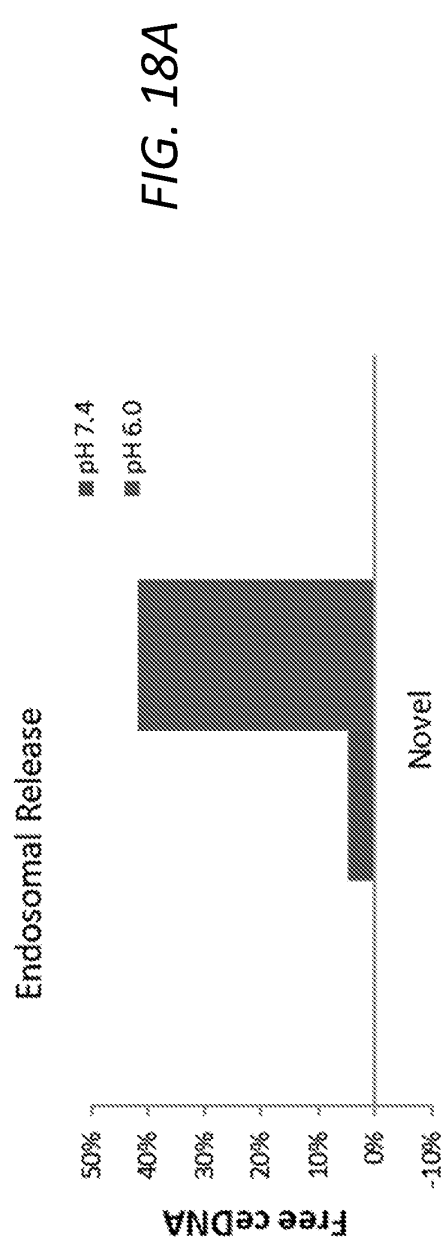
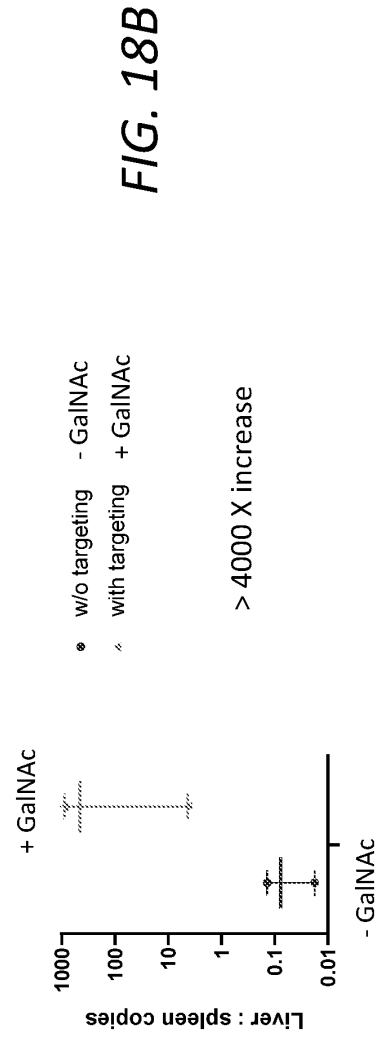
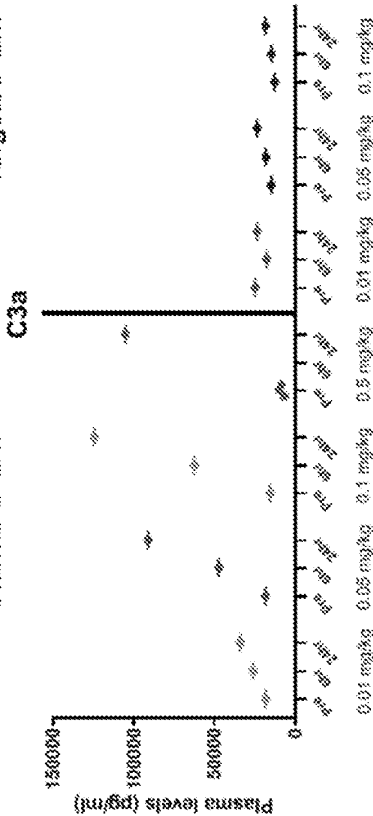


FIG. 19

Standard LNP Targeted LNP (ssOP4 + GalNAc)



Standard LNP Targeted LNP (ssOP4 + GalNAc)

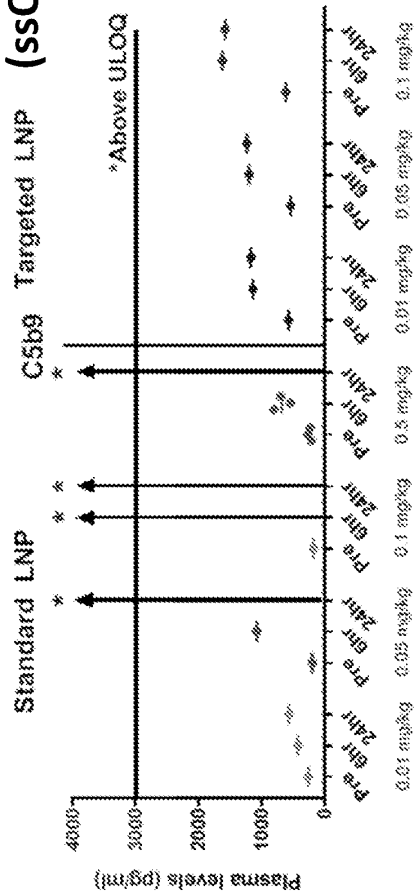


FIG. 21

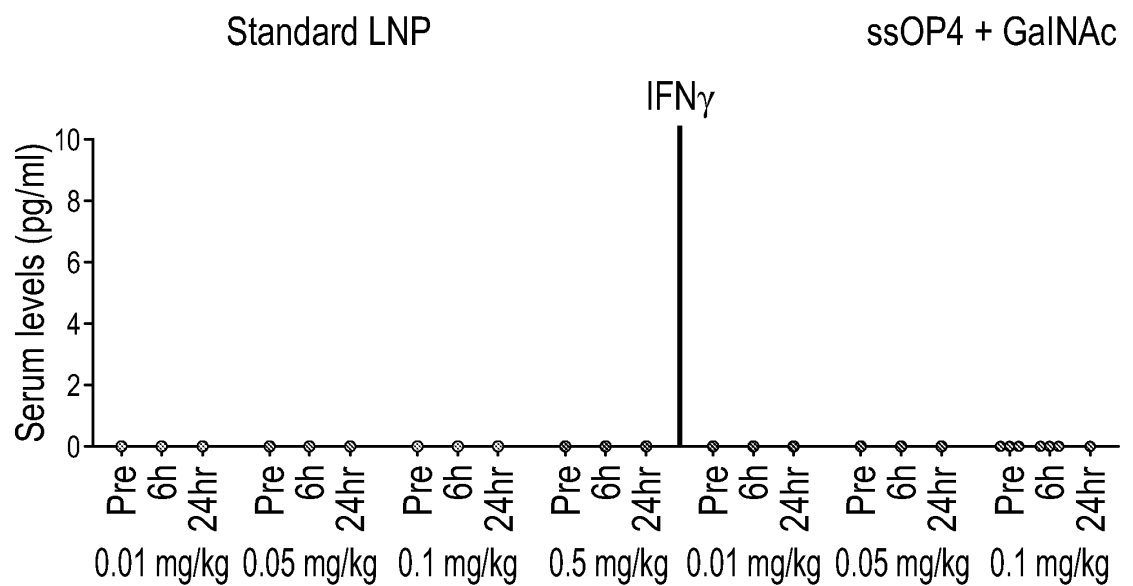
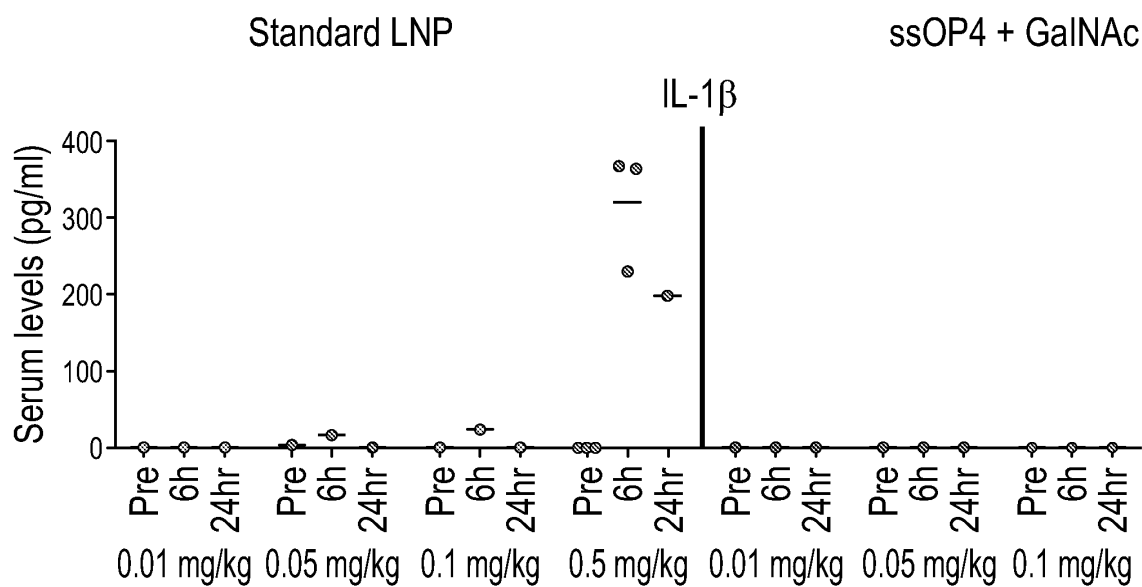


FIG. 22

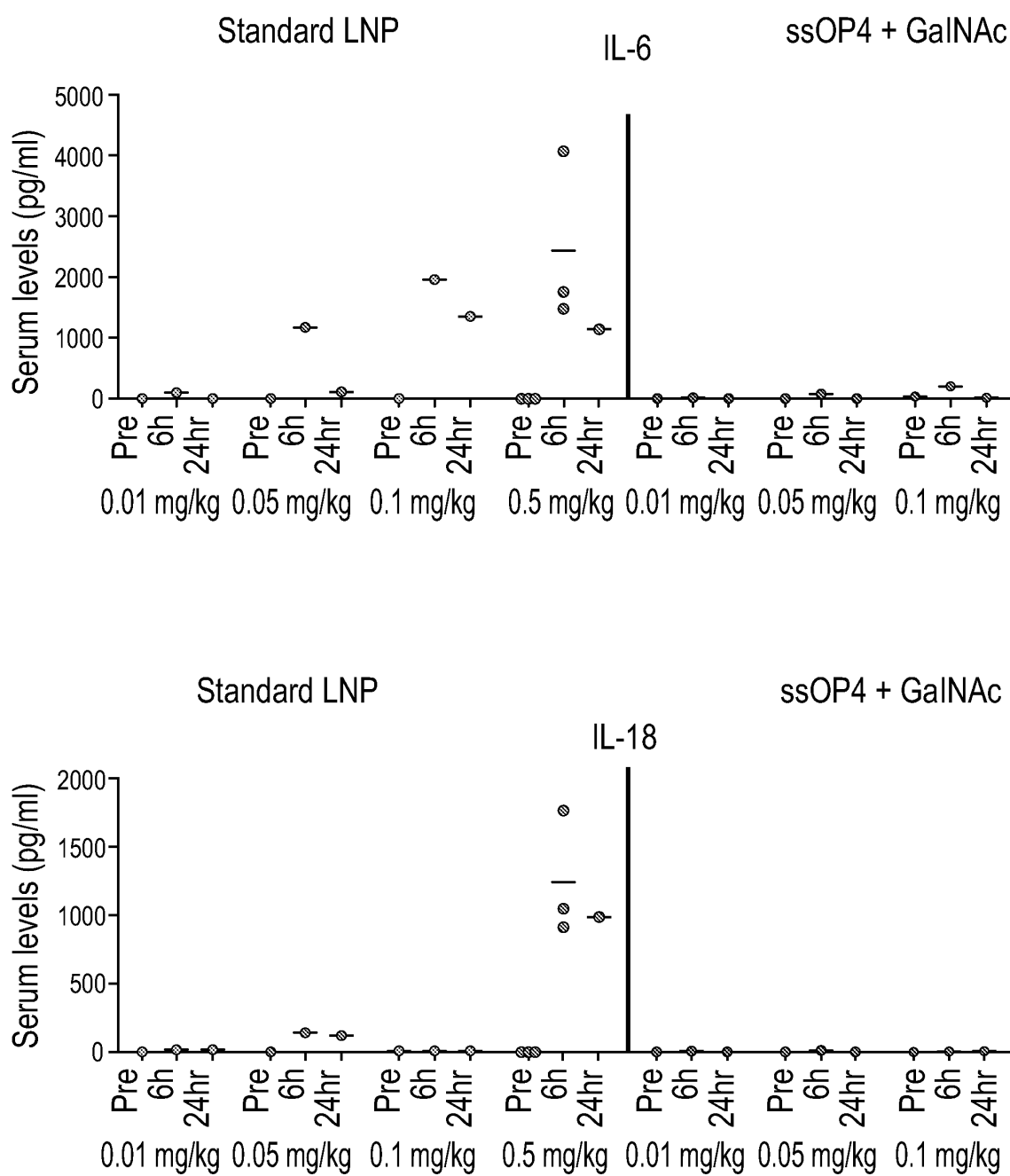


FIG. 23

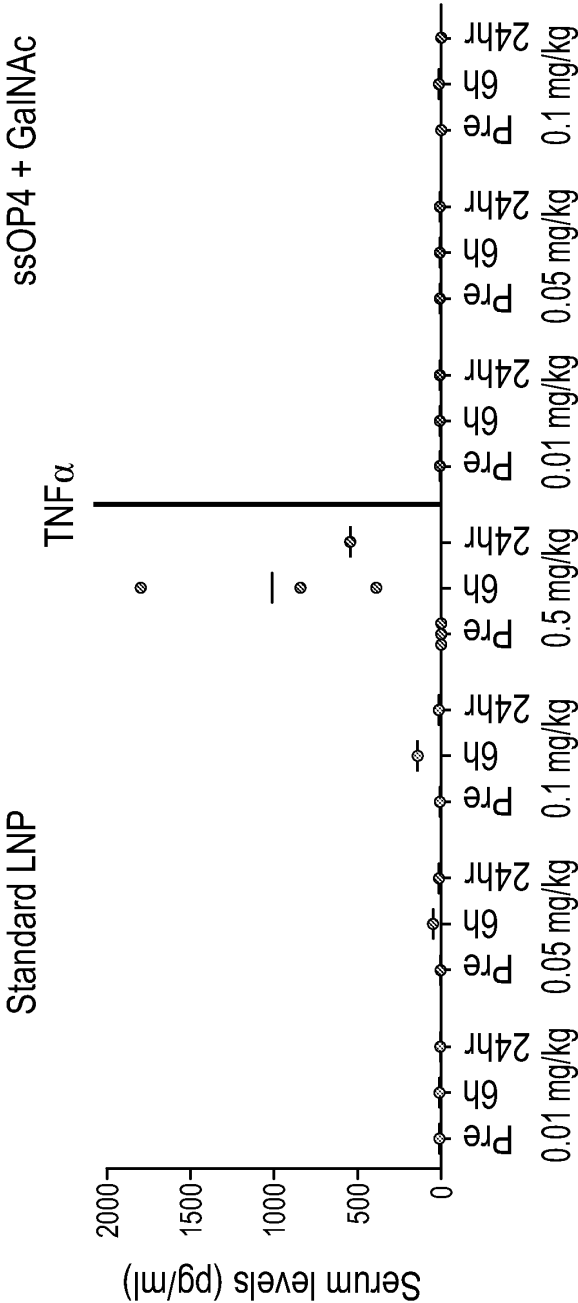


FIG. 24

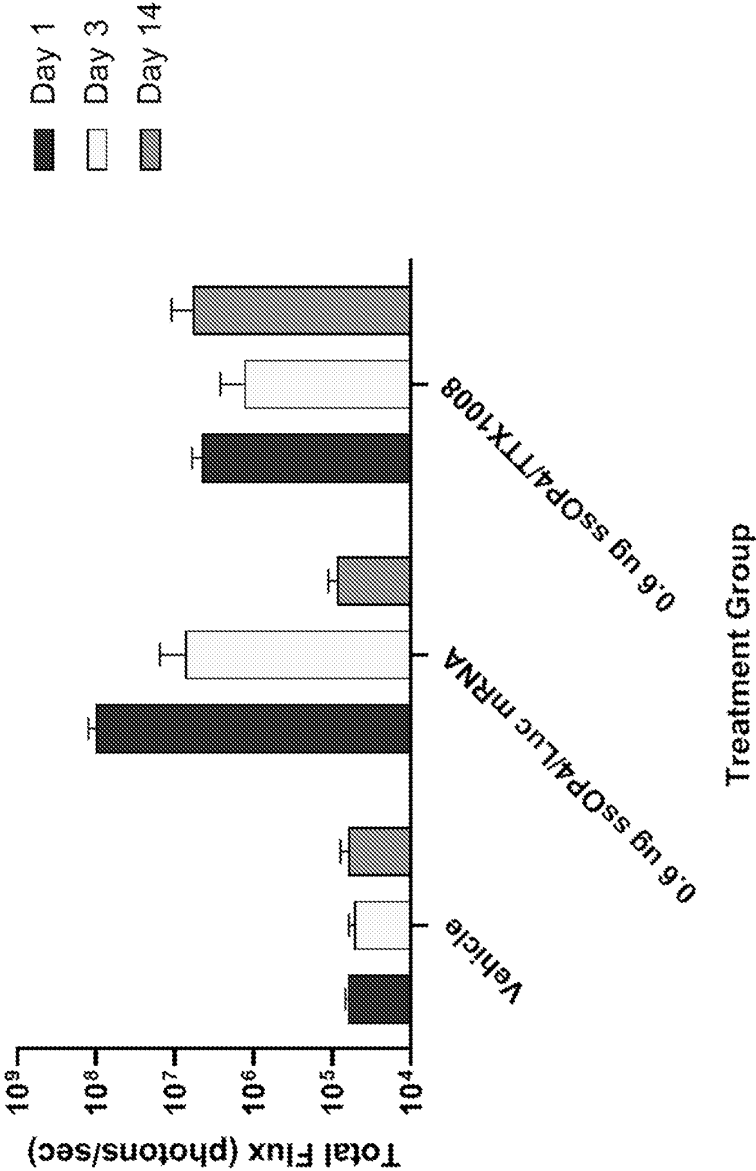


FIG. 25

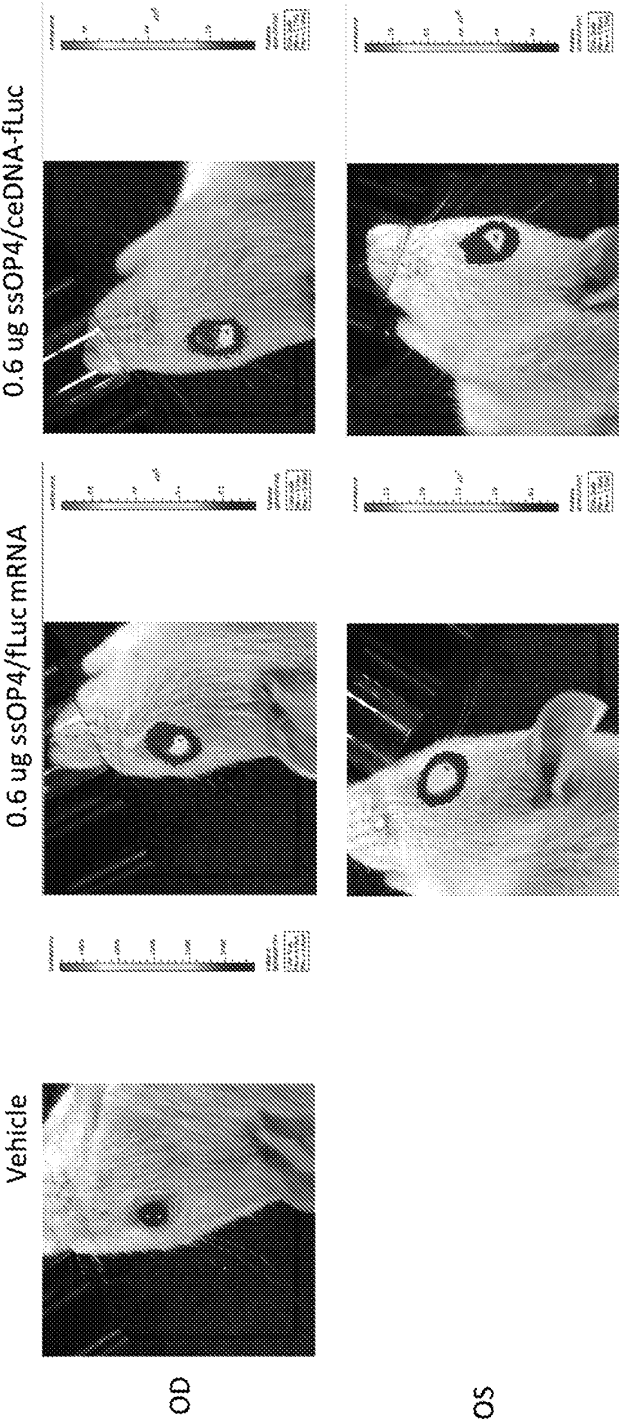


FIG. 26
Longitudinal

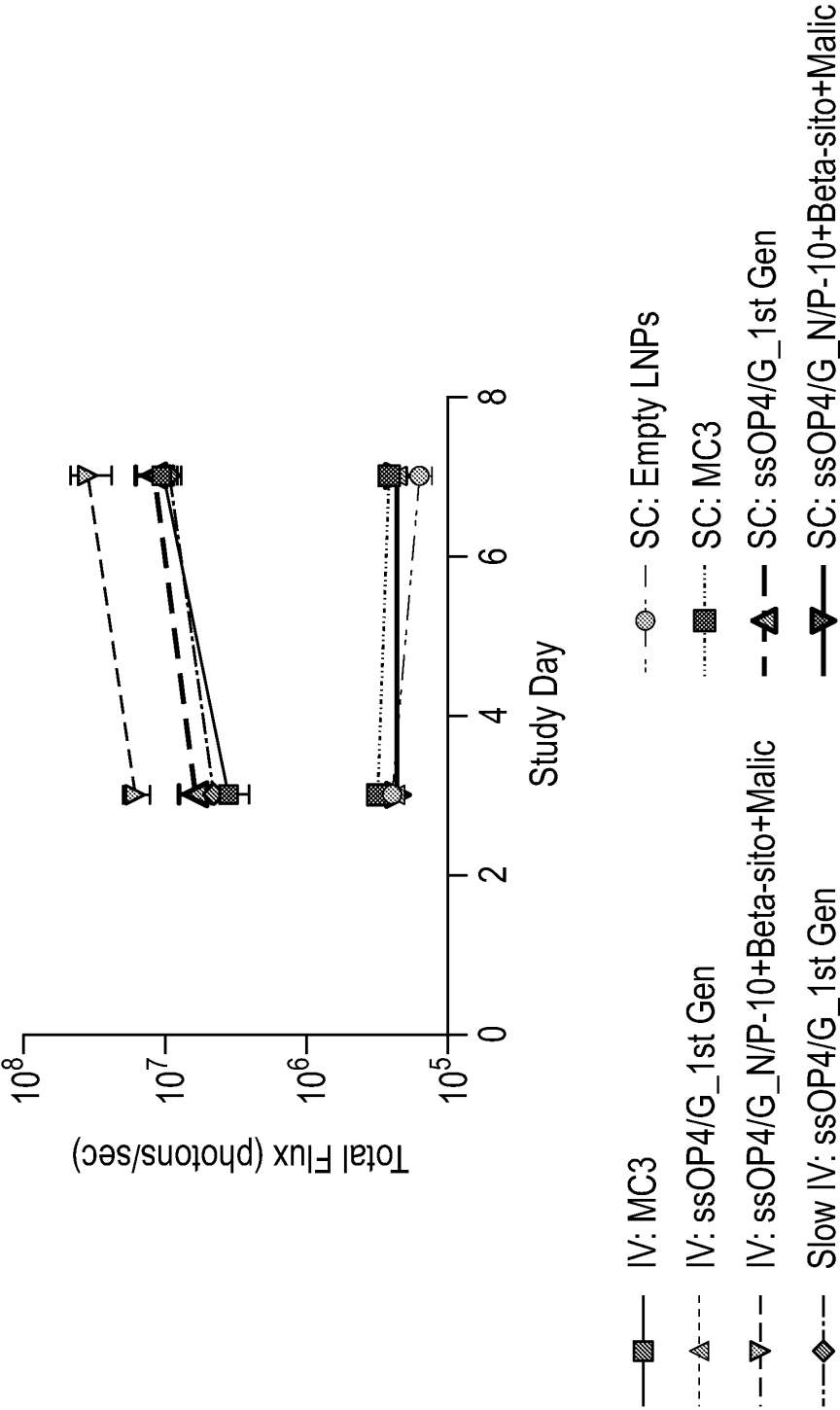


FIG. 27

