

1/50

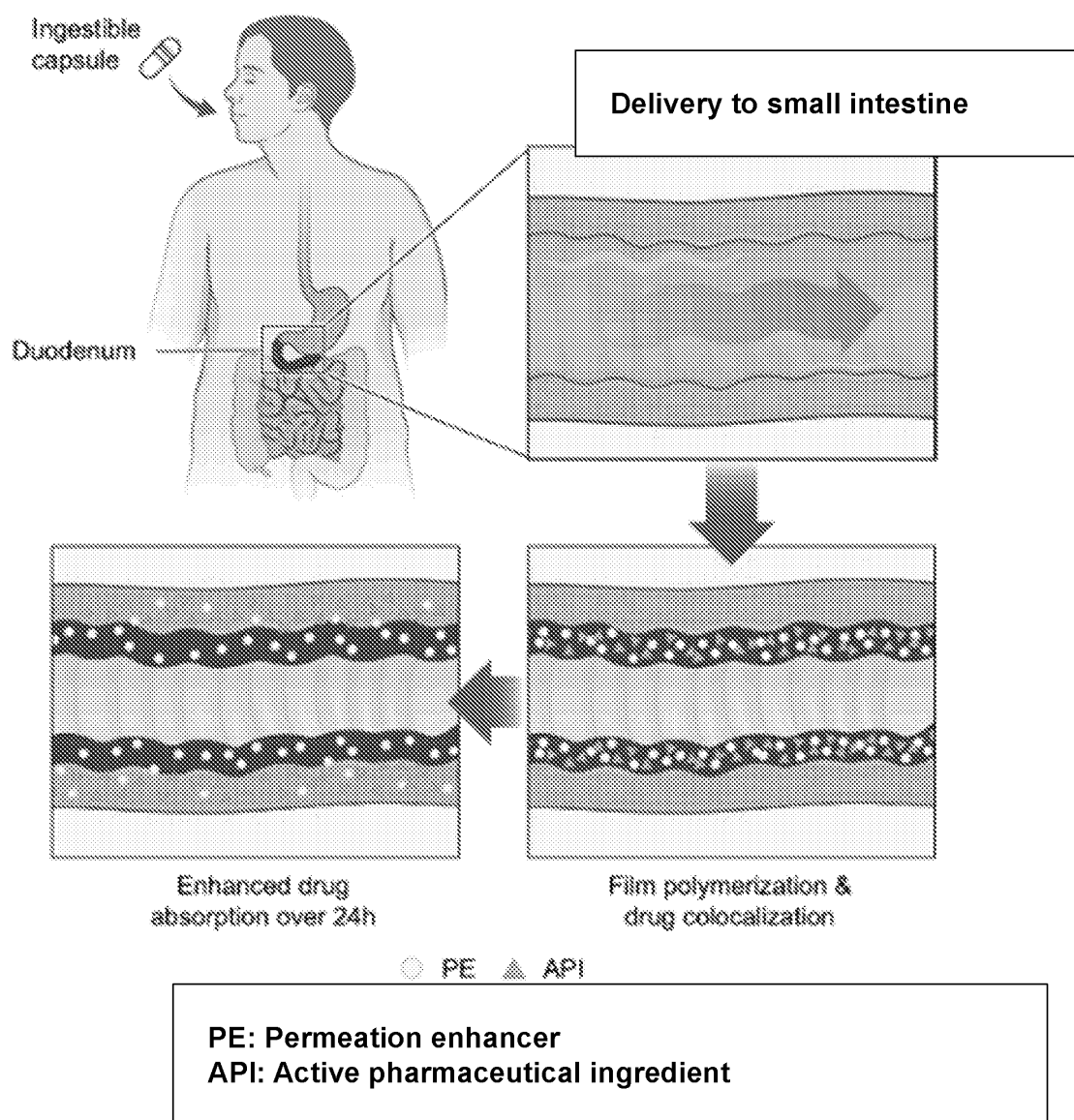


FIG. 1A

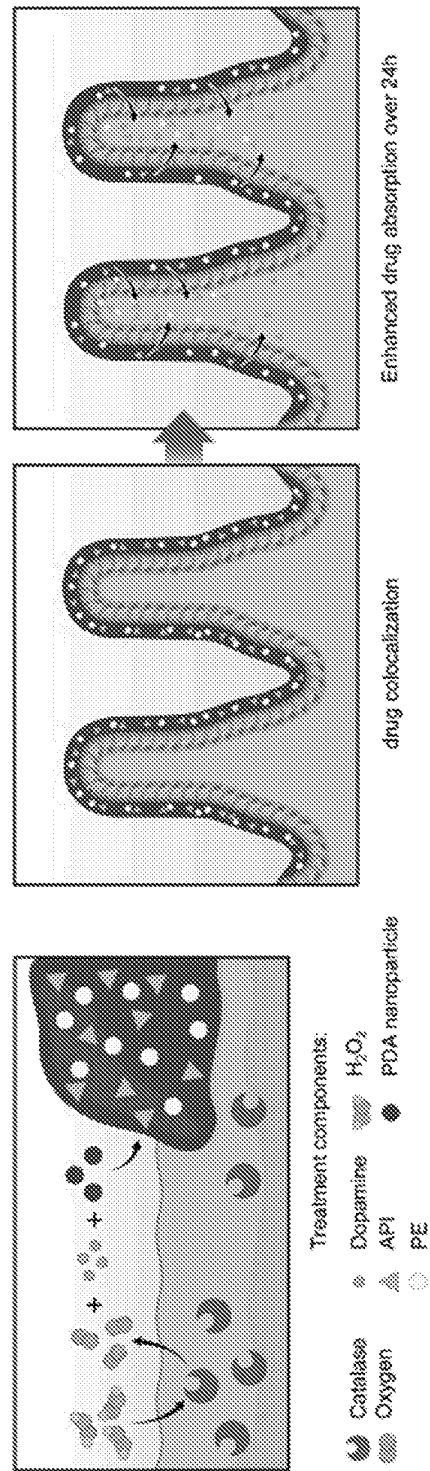


FIG. 1B

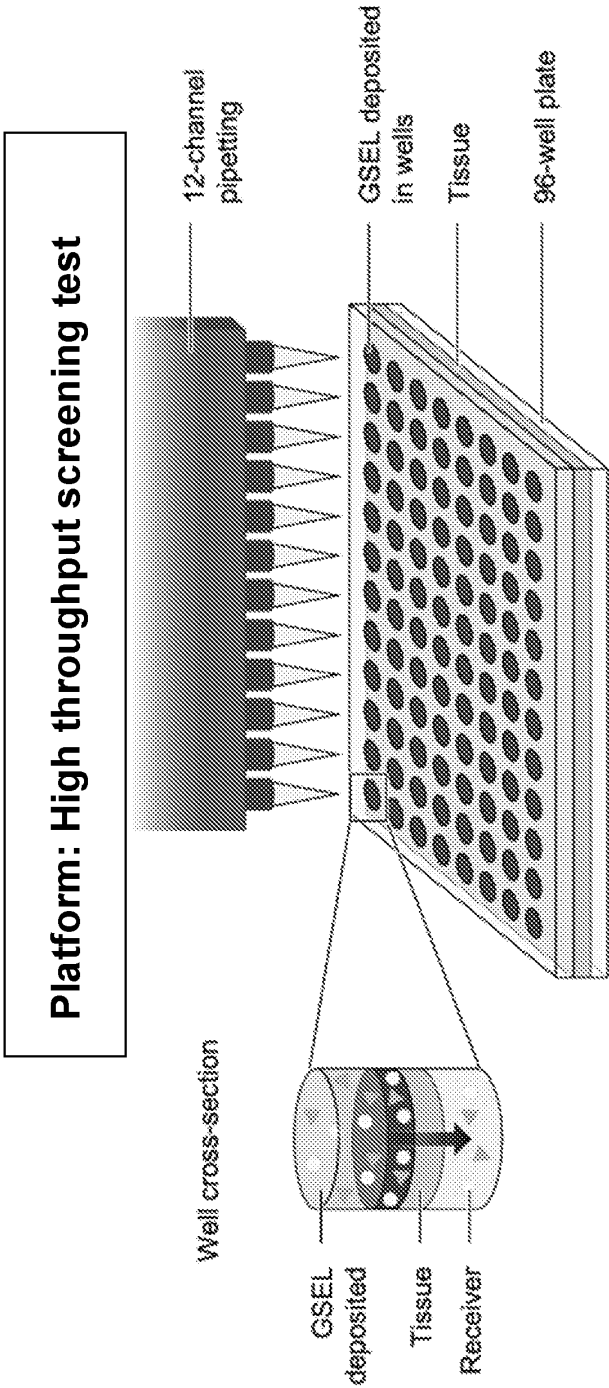
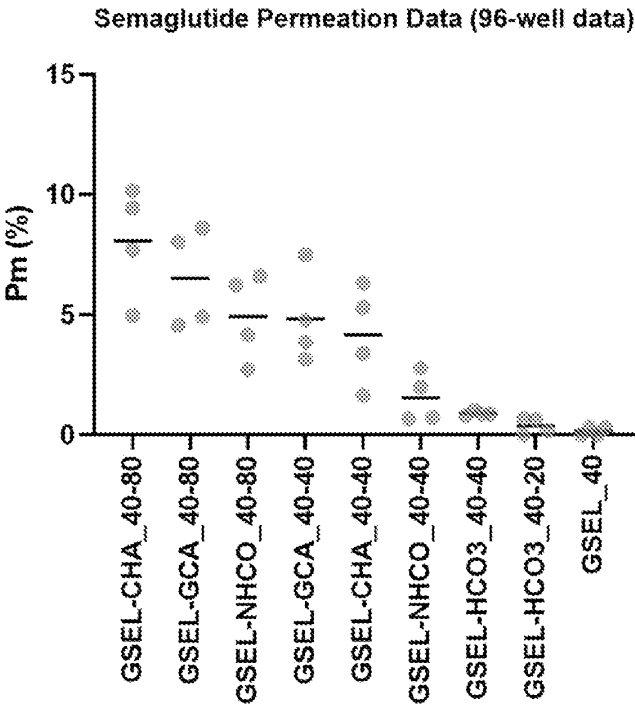


FIG. 1C

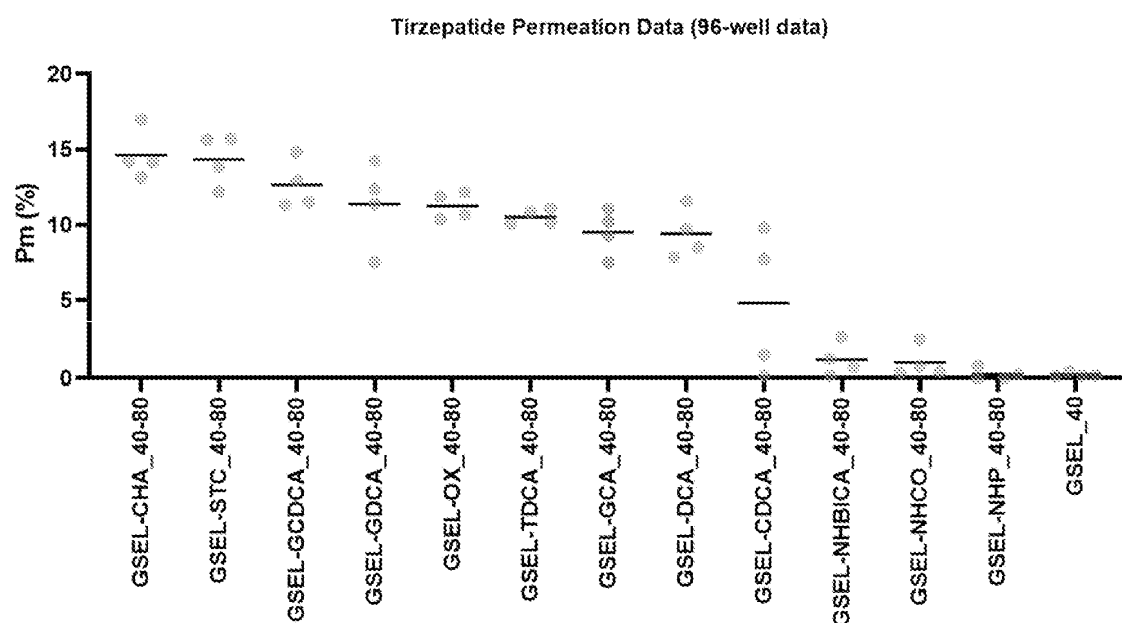
FIG. 1D



Formulation ID	Pm
GSEL-CHA_40-80	8.066591
GSEL-GCA_40-80	6.522269
GSEL-NHCO_40-80	4.936273
GSEL-GCA_40-40	4.825054
GSEL-CHA_40-40	4.165257
GSEL-NHCO_40-40	1.545204
GSEL-HCO3_40-40	0.892816
GSEL-HCO3_40-20	0.382873
GSEL_40	0.158588

5/50

FIG. 1E



Formulation ID	Pm (%)
GSEL-CHA_40-80	14.617225
GSEL-STC_40-80	14.3403775
GSEL-GCDCA_40-80	12.6334625
GSEL-GDCA_40-80	11.37472575
GSEL-OX_40-80	11.2640775
GSEL-TDCA_40-80	10.5118075
GSEL-GCA_40-80	9.494401
GSEL-DCA_40-80	9.4135005
GSEL-CDCA_40-80	4.8189925
GSEL-NHBICA_40-80	1.24080575
GSEL-NHCO_40-80	1.03374675
GSEL-NHP_40-80	0.26399475
GSEL_40	0.229966

SUBSTITUTE SHEET (RULE 26)

FIG. 1F

6/50

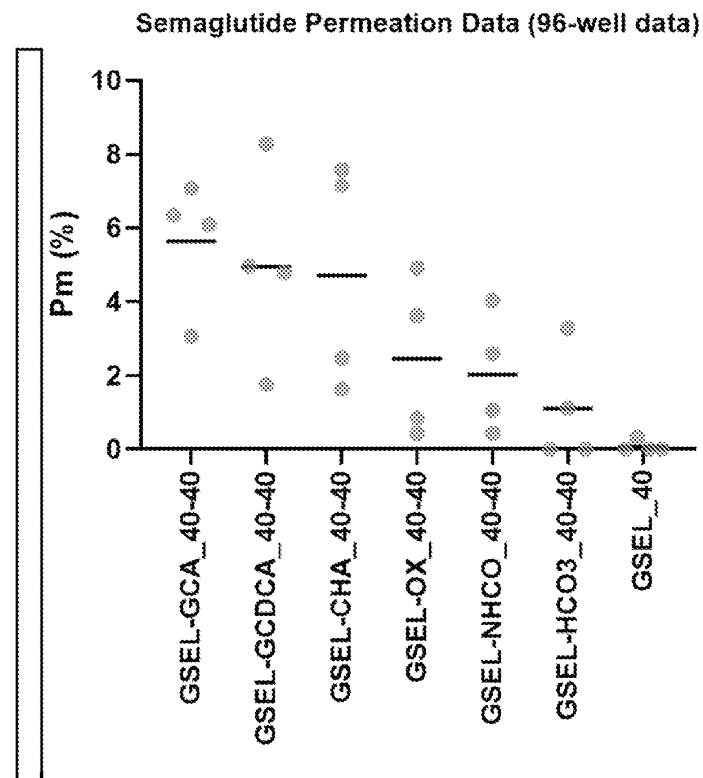


FIG. 1G

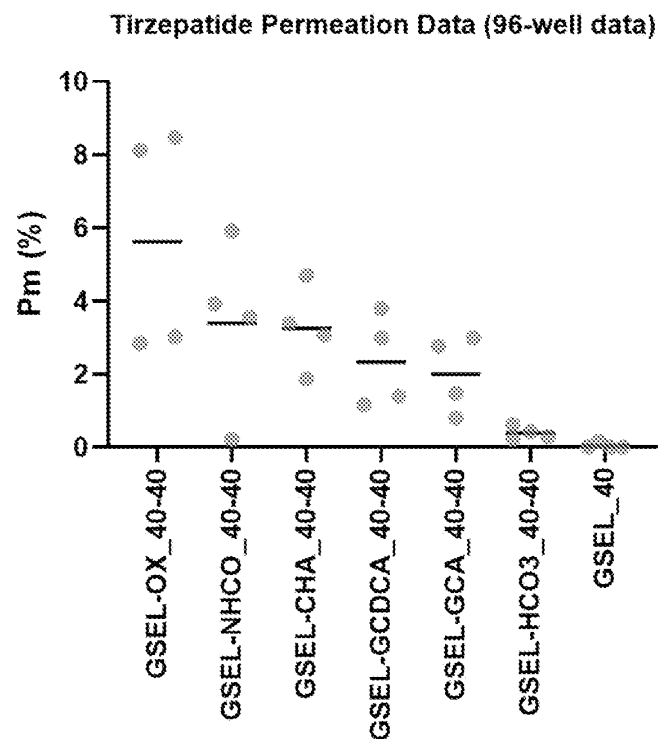


FIG. 1H

7/50

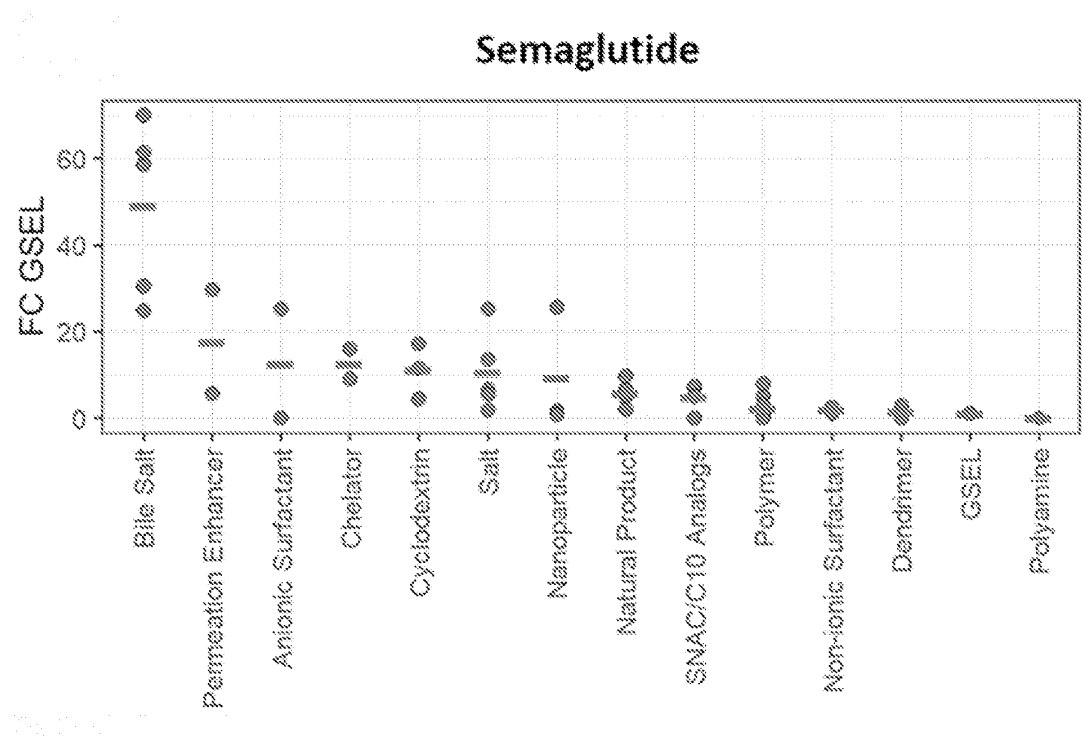


FIG. 1I

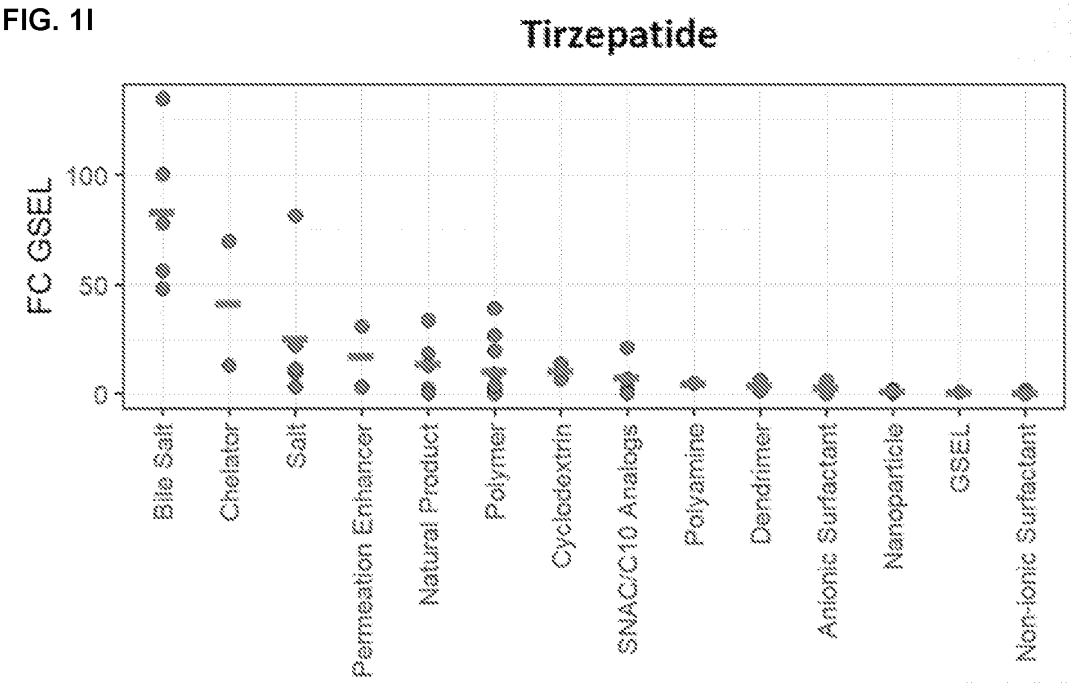
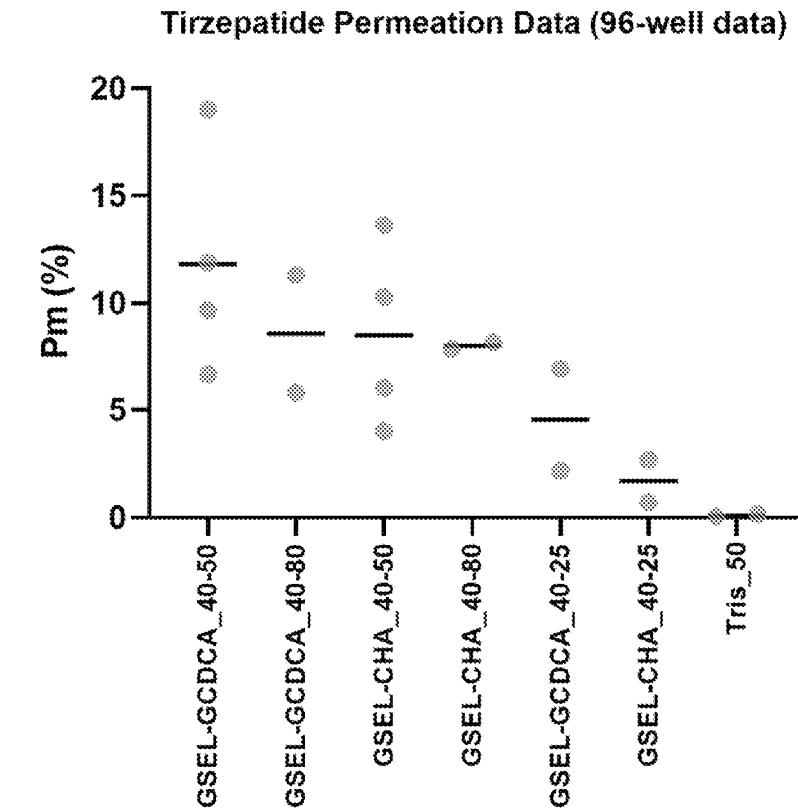


FIG. 1J

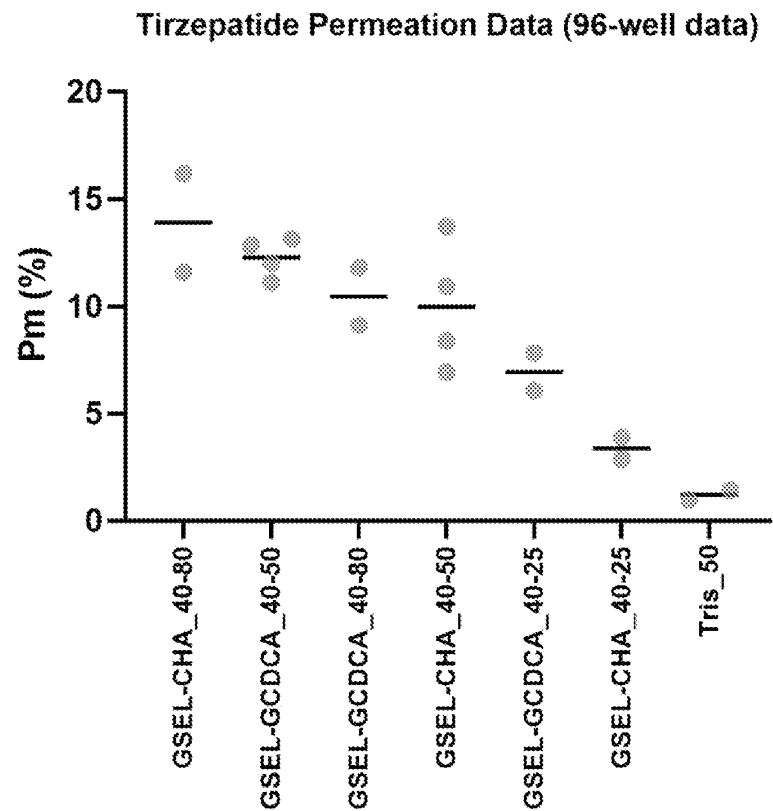
8/50



Formulation ID	Pm (%)
GSEL-GCDCA_40-50	11.81723
GSEL-GCDCA_40-80	8.570564
GSEL-CHA_40-50	8.498895
GSEL-CHA_40-80	8.014459
GSEL-GCDCA_40-25	4.560753
GSEL-CHA_40-25	1.701084
TRIS_50	0.106264

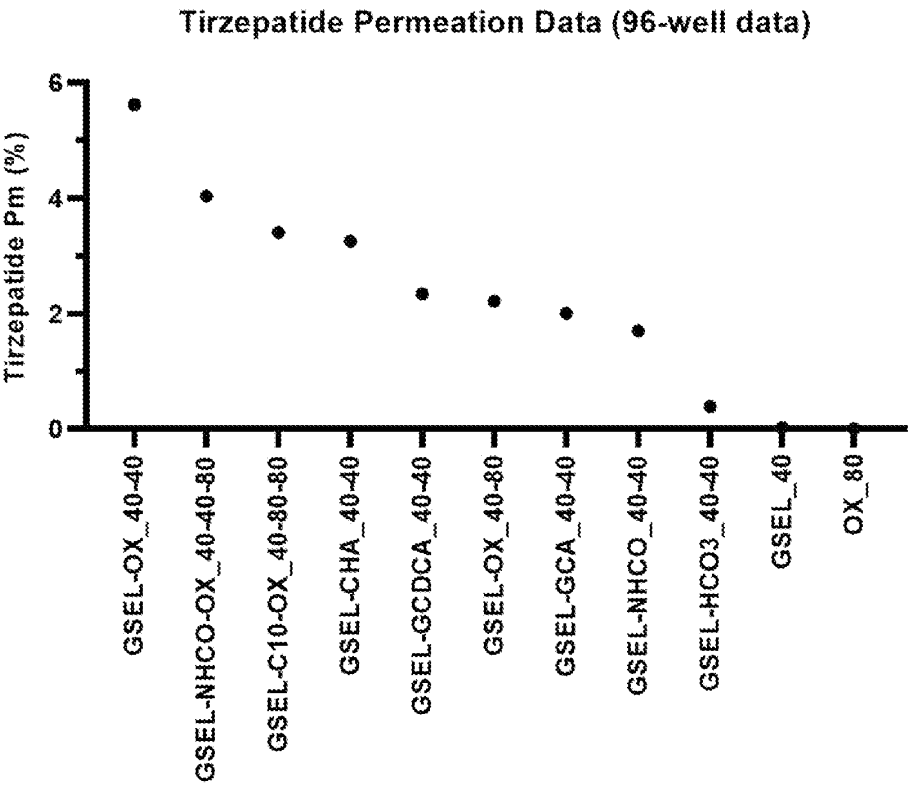
FIG. 1K

9/50



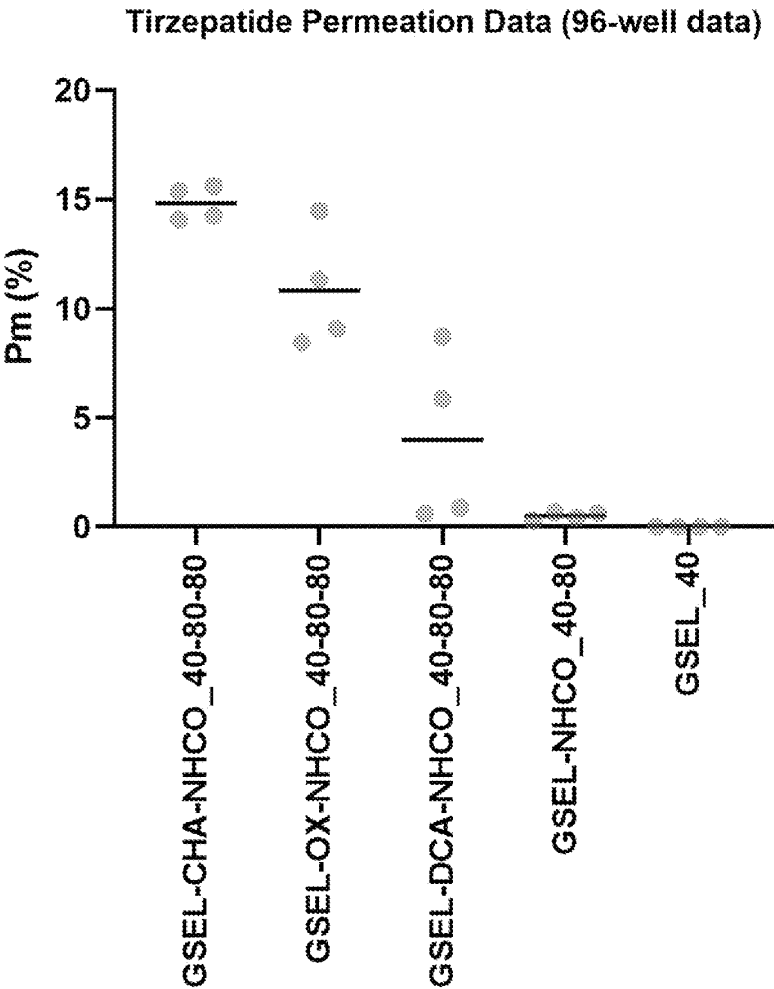
Formulation ID	Pm (%)
GSEL-CHA_40-80	13.89015
GSEL-GCDCA_40-50	12.27499
GSEL-GCDCA_40-80	10.45806
GSEL-CHA_40-50	9.989287
GSEL-GCDCA_40-25	6.949256
GSEL-CHA_40-25	3.373988
TRIS_50	1.206198

FIG. 2A



Formulation ID	Pm
GSEL-OX_40-40	5.618745
GSEL-NHCO-OX_40-40-80	4.040422
GSEL-CHA_40-40	3.255406
GSEL-GCDCA_40-40	2.337877
GSEL-OX_40-80	2.209829
GSEL-GCA_40-40	2.007605
GSEL-NHCO_40-40	1.699936
GSEL-HCO3_40-40	0.388316
GSEL_40	0.020832
OX_80	0

FIG. 2B

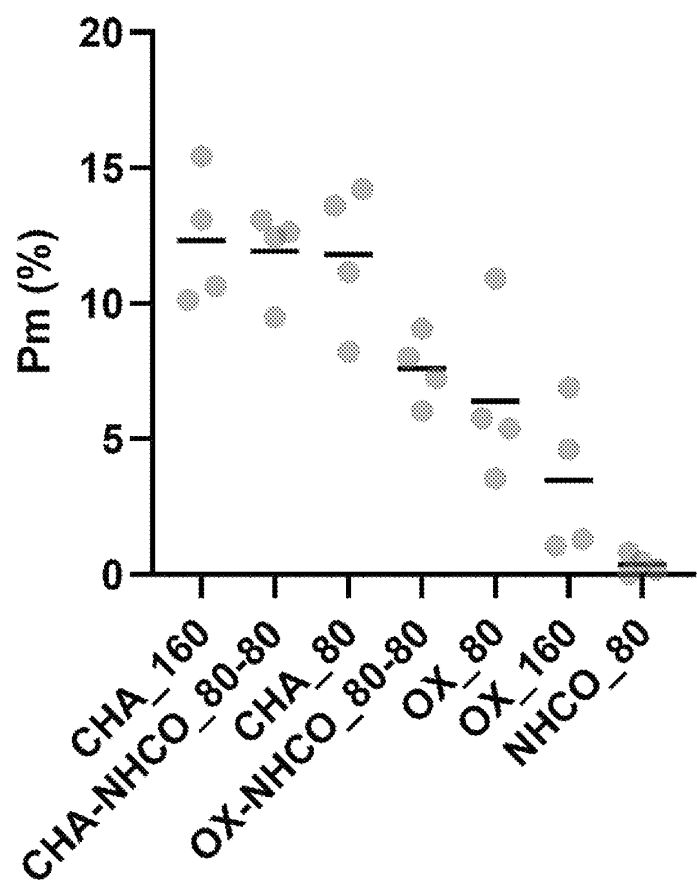


Formulation ID	Pm (%)
GSEL-CHA-NHCO_40-80-80	14.830165
GSEL-OX-NHCO_40-80-80	10.838854
GSEL-DCA-NHCO_40-80-80	4.02071725
GSEL-NHCO_40-80	0.502196
GSEL_40	0

FIG. 2C

12/50

Tirzepatide Permeation Data (96-well data)



Formulation ID	Pm (%)
CHA_160	12.32177039
CHA-NHCO_80-80	11.92290826
CHA_80	11.80230598
OX-NHCO_80-80	7.6003696
OX_80	6.400580357
OX_160	3.472608235
NHCO_80	0.37626491

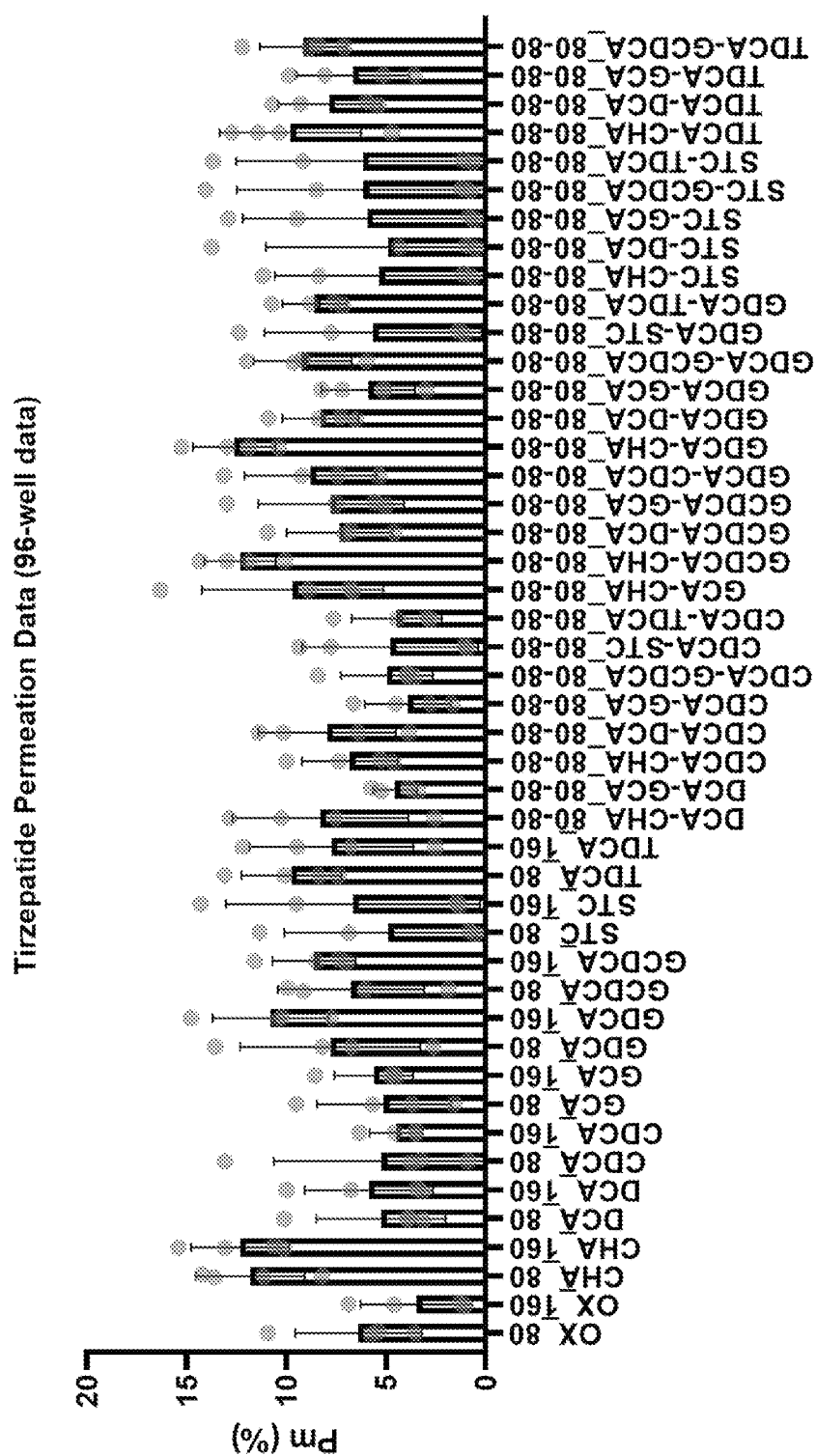


FIG. 2D

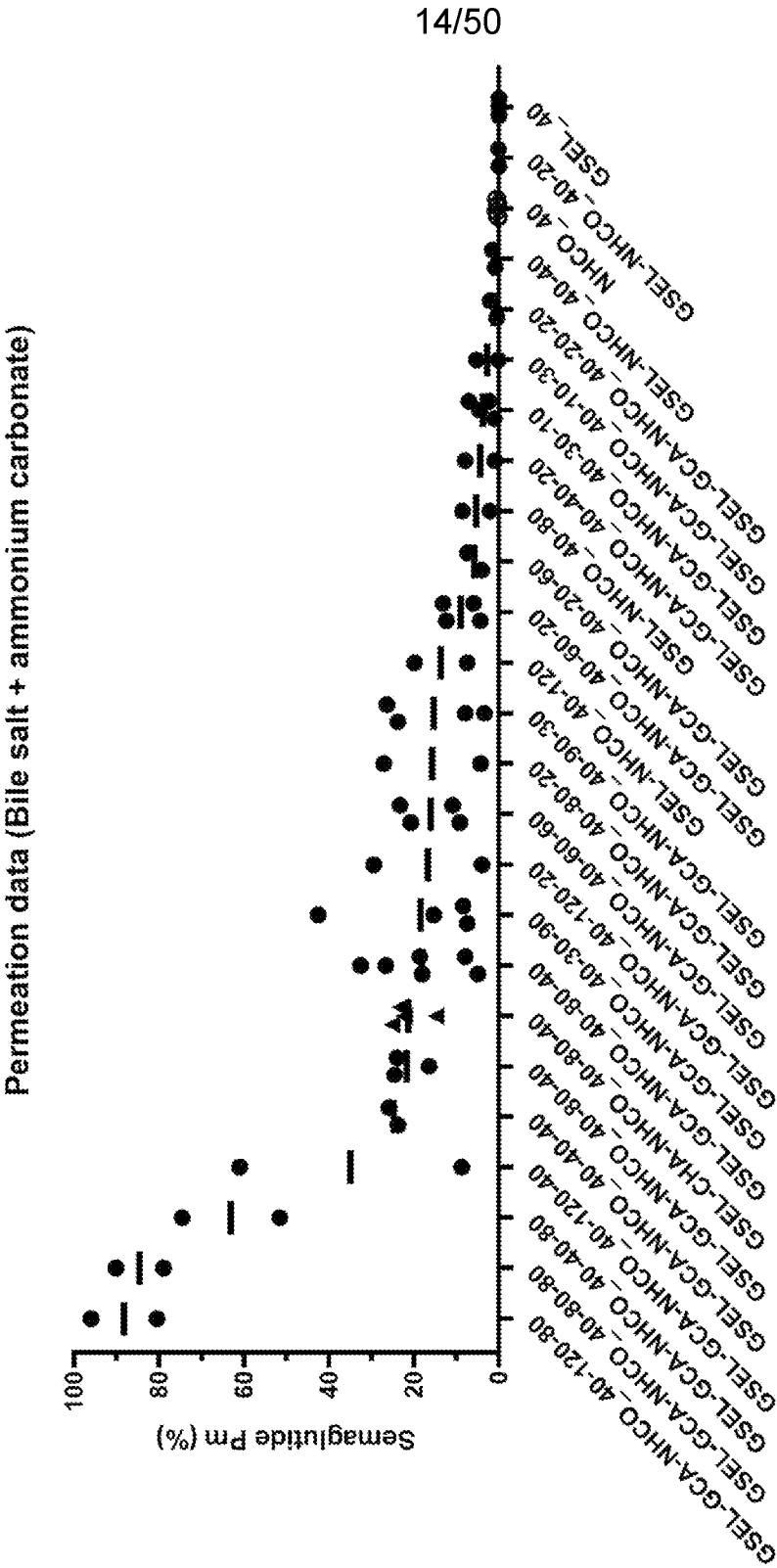
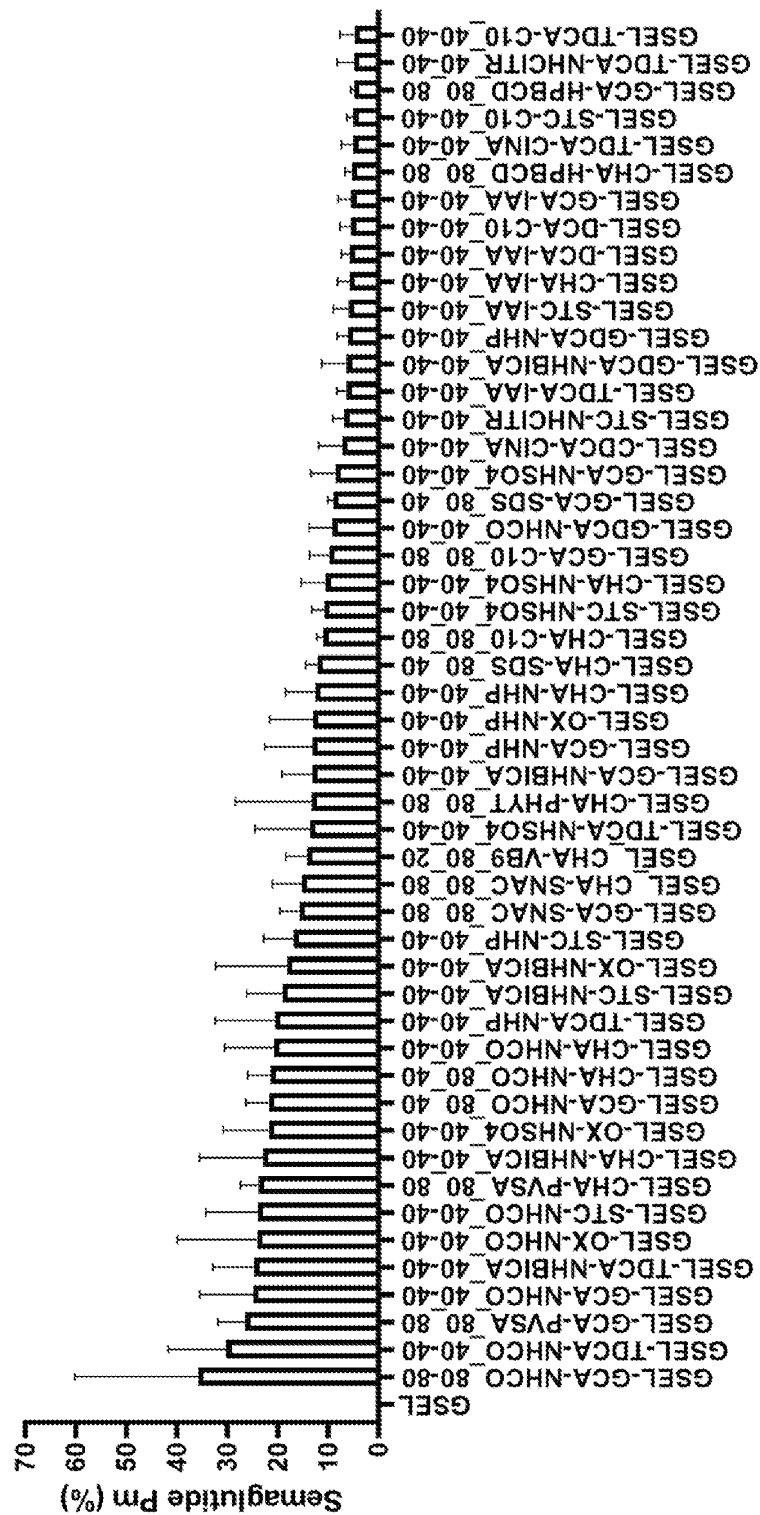


FIG. 3A



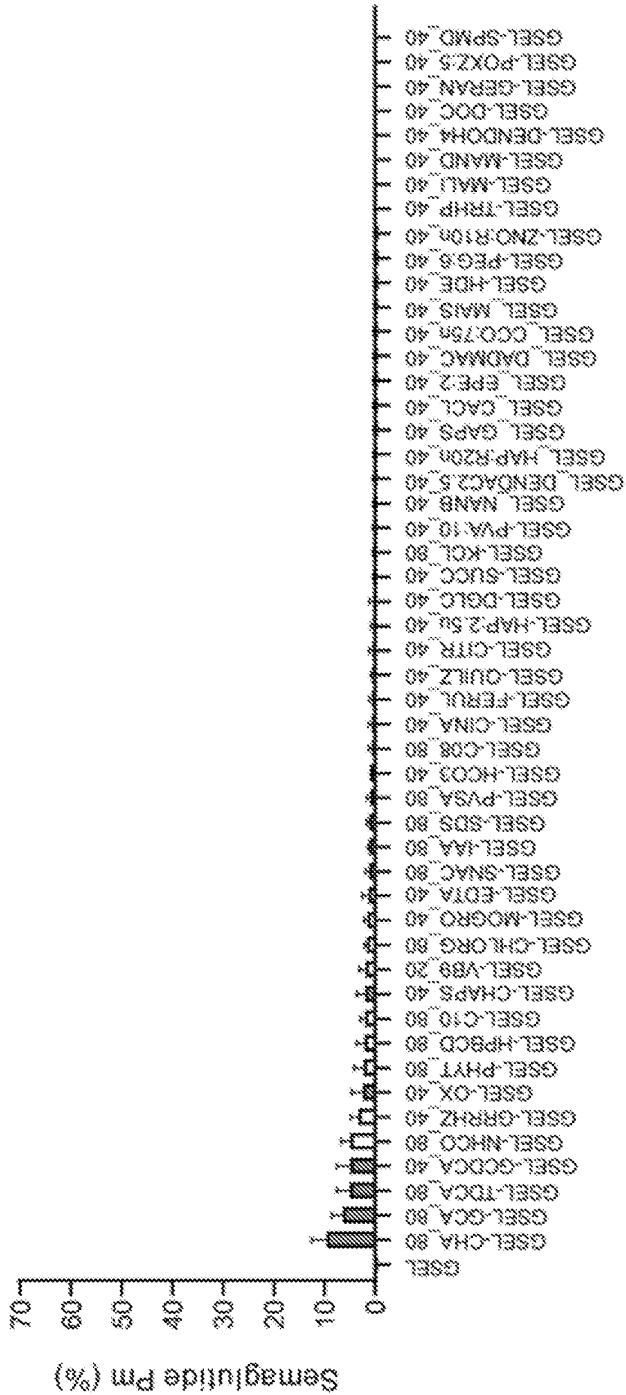


FIG. 3C

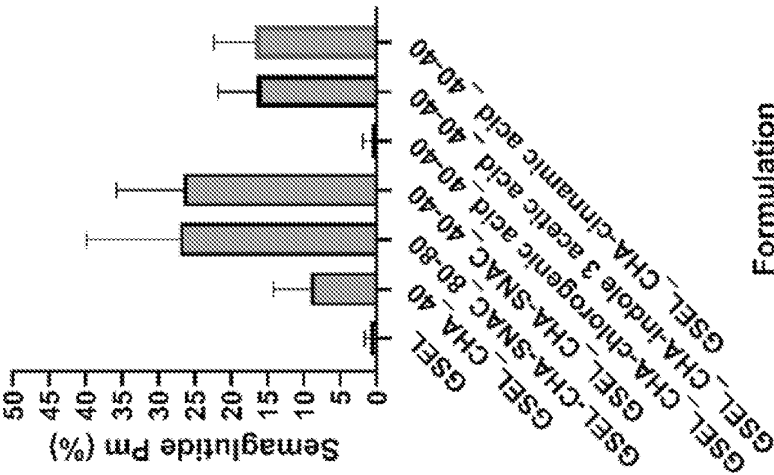


FIG. 3E

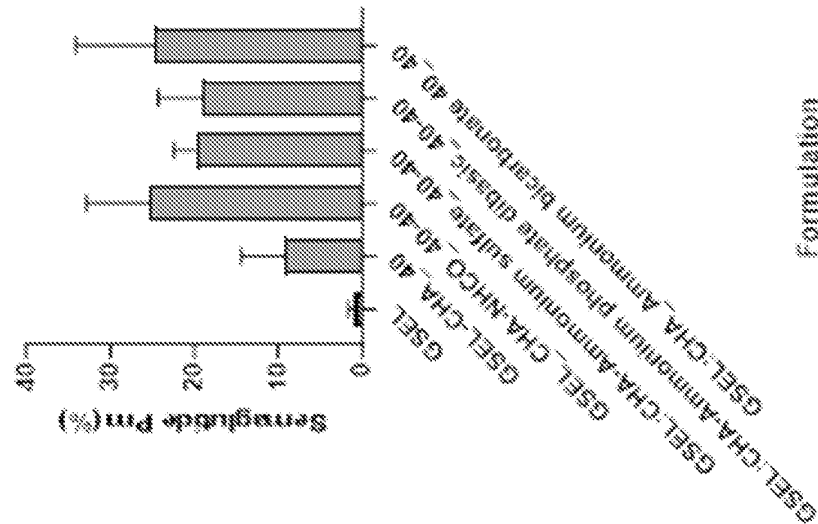


FIG. 3D

FIG. 4

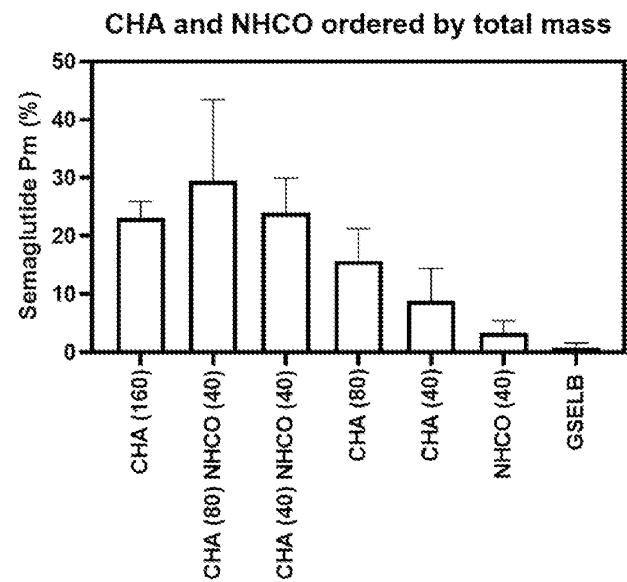


FIG. 5

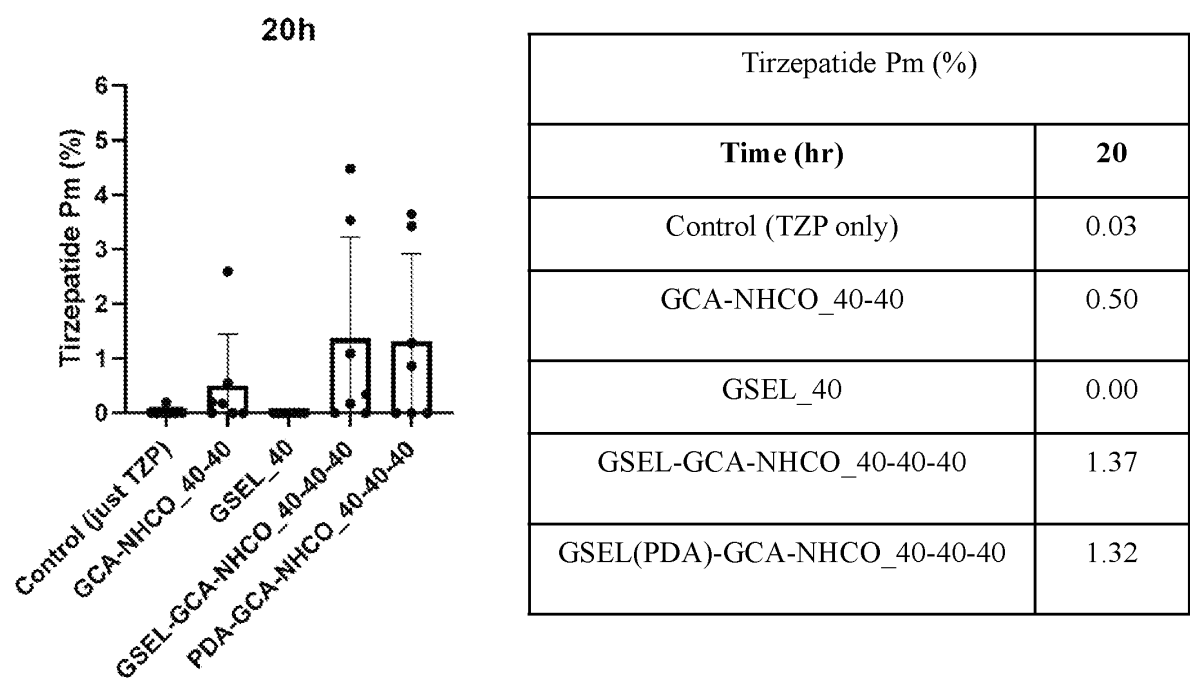


FIG. 6A

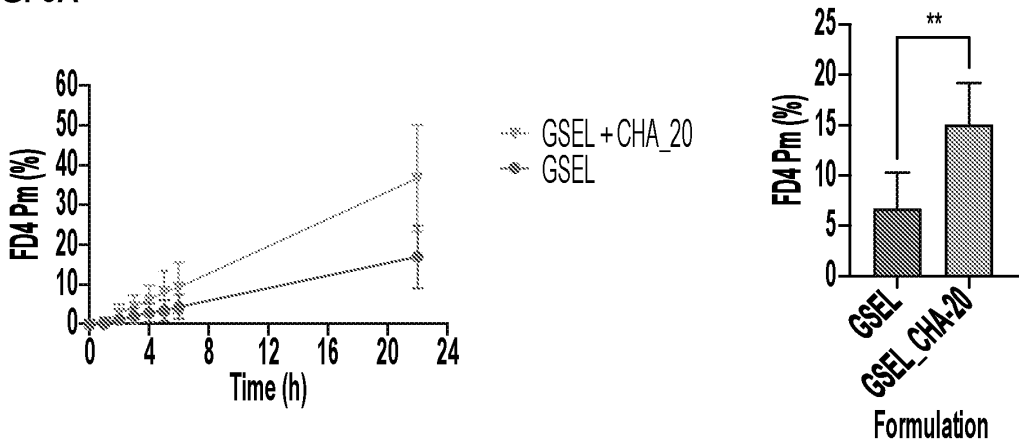
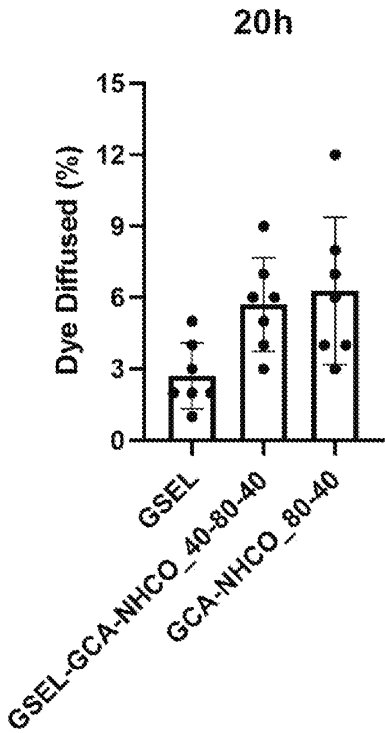


FIG. 6B



FD40 Pm (%)			
Time (hr)	GSEL_40	GSEL-GCA-NHCO_40-80-40	GCA-NHCO_80-40
6	0.29	0.71	0.57
20	2.71	5.71	6.29

20/50

FIG. 7A

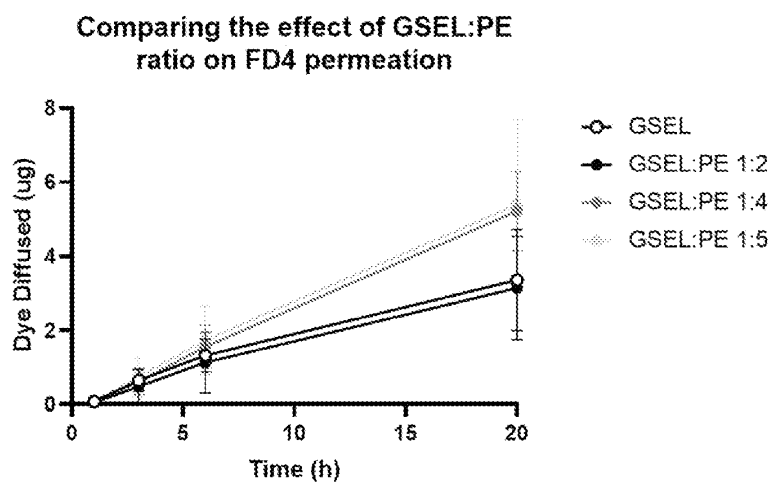


FIG. 7B

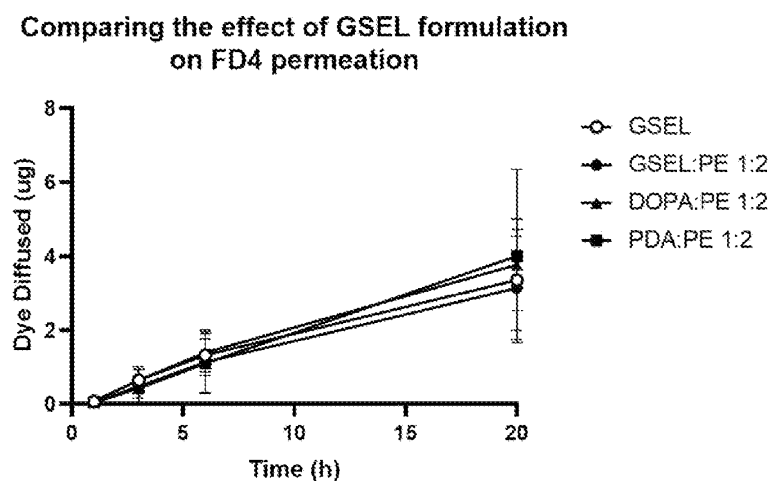
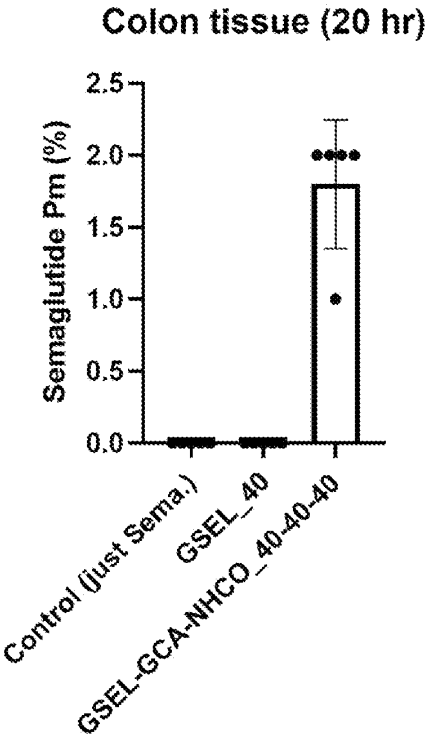


FIG. 7C

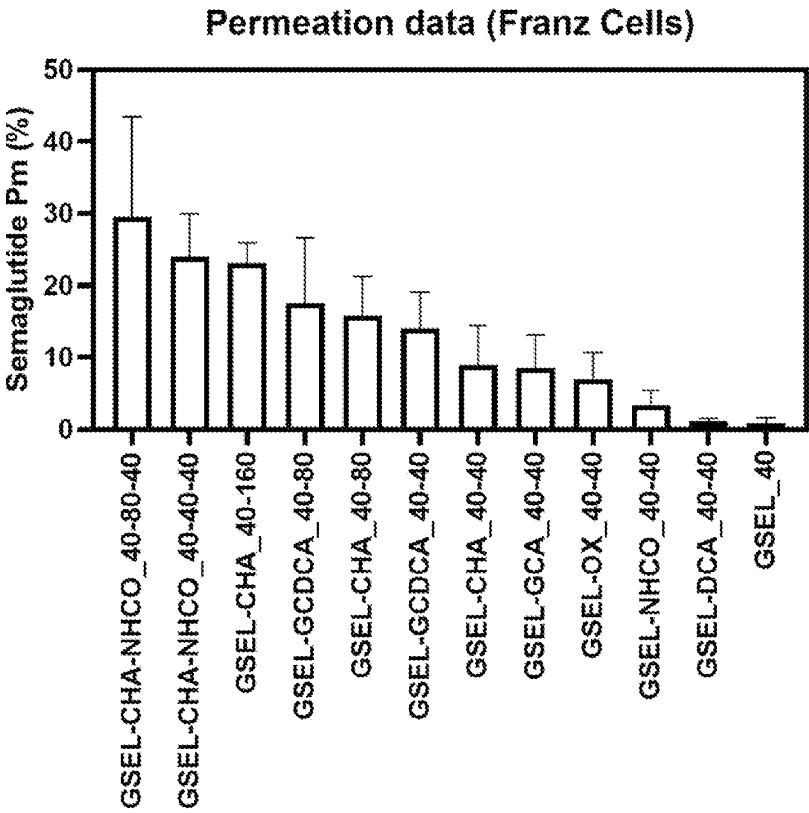
FD4 diffused (μg)						
Time (hr)	GSEL:PE 1:2	PDA:PE 1:2	DOPA:PE 1:2	GSEL:PE 1:4	GSEL:P E 1:5	GSEL
1	0.05	0.05	0.08	0.08	0.09	0.08
3	0.49	0.43	0.65	0.62	0.74	0.65
6	1.14	1.10	1.40	1.56	1.74	1.32
20	3.14	4.00	3.77	5.21	5.40	3.36

FIG. 8



Semaglutide (SEMA) Pm on colon tissue (%)			
Time (hr)	Control (just Sema.)	GSEL_40	GSEL-GCA-NHCO_40-40-40
20	0	0	1.8

FIG. 9



Formulation	Pm (%)
GSEL-CHA-NHCO 40-80-40	29.57
GSEL-CHA-NHCO 40-40-40	24.00
GSEL-CHA 40-160	23.14
GSEL-GCDCA 40-80	17.50
GSEL-CHA 40-80	15.77
GSEL-GCDCA 40-40	14.00
GSEL-CHA 40-40	8.95
GSEL-GCA 40-40	8.55
GSEL-OX 40-40	7.00
GSEL-NHCO 40-40	3.38
GSEL-DCA 40-40	1.14
GSEL 40	0.86

FIG. 10A

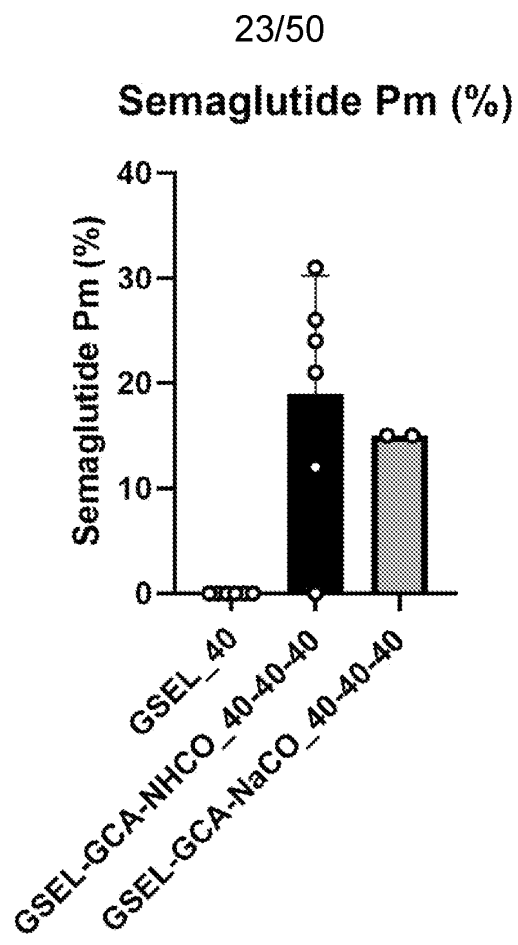


FIG. 10B

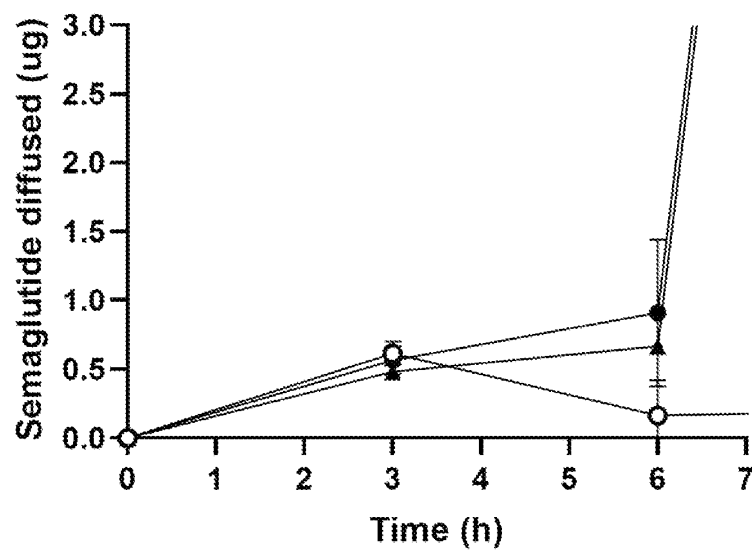


FIG. 10C

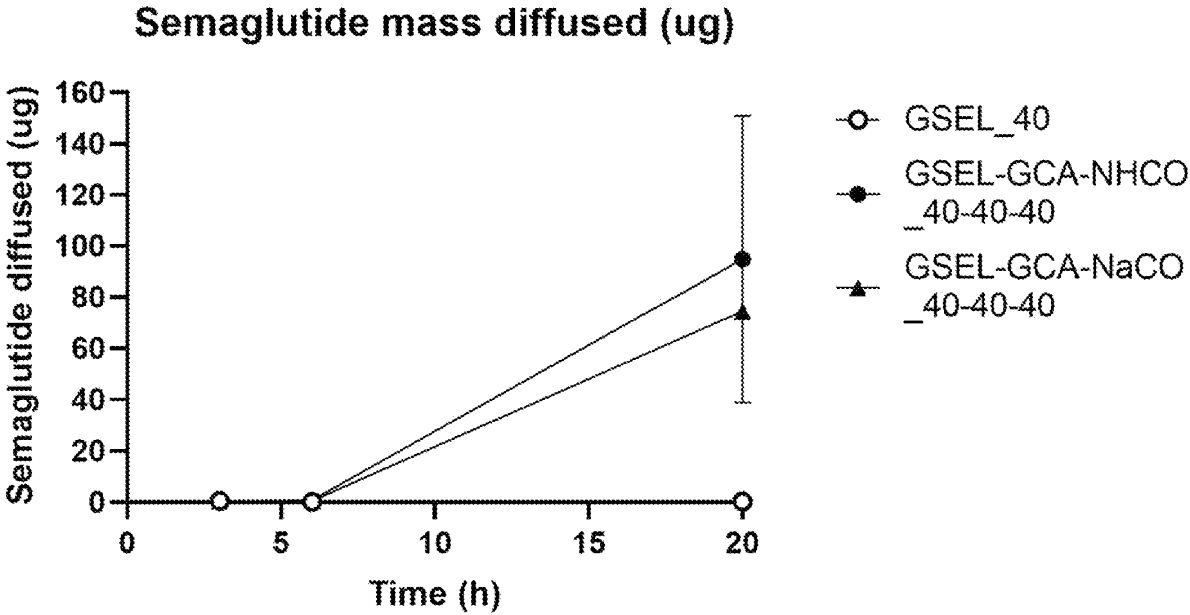


FIG. 10D

Semaglutide Pm (%)			
Time (hr)	GSEL_40	GSEL-GCA-NHCO_40-40-40	GSEL-GCA-NaCO_40-40-40
20	0	19	15

FIG. 11A

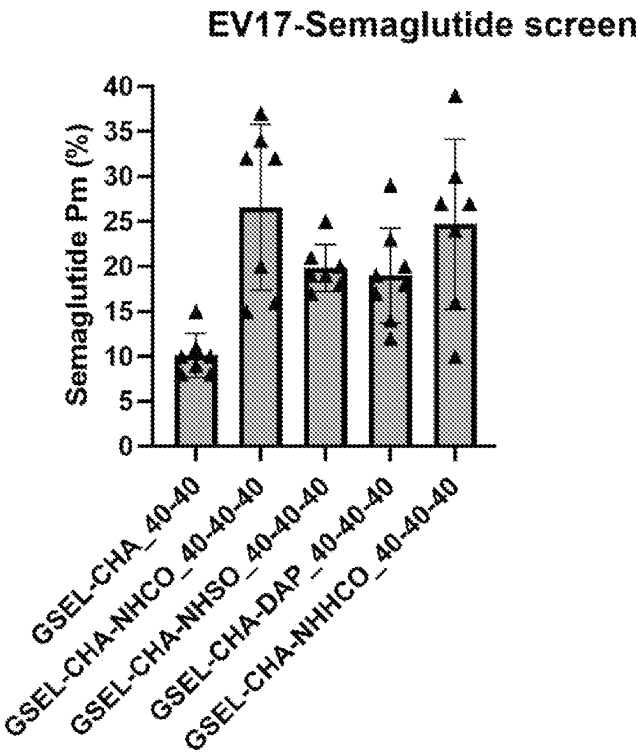


FIG. 11B

Semaglutide Pm					
Time (hr)	GSEL-CHA_40-40	GSEL-CHA-NHCO_40-40-40	GSEL-CHA-NHSO_40-40-40	GSEL-CHA-DAP_40-40-40	GSEL-CHA-NHHCO_40-40-40
20	10.14	26.57	19.86	19.00	24.71

FIG. 12A

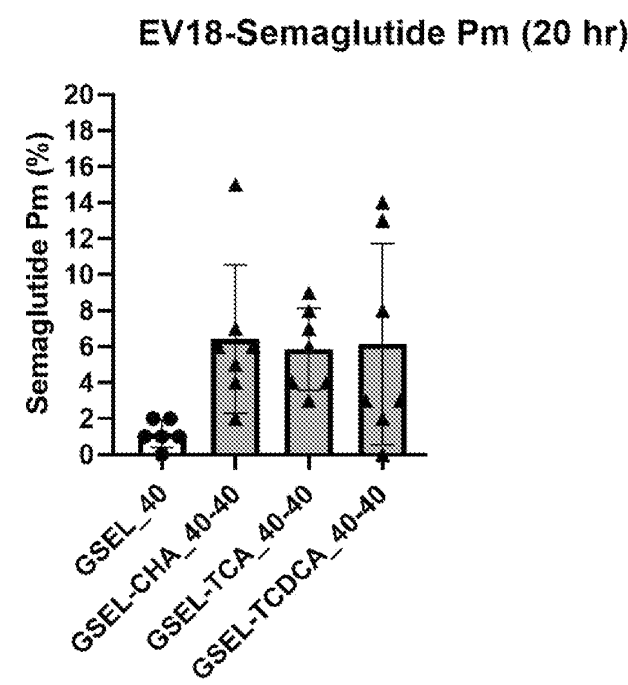


FIG. 12B

Semaglutide Pm				
Time (hr)	GSEL_40	GSEL-CHA_40-40	GSEL-TCA_40-40	GSEL-TCDCA_40-40
20	1.17	6.43	5.86	6.14

FIG. 13A

27/50

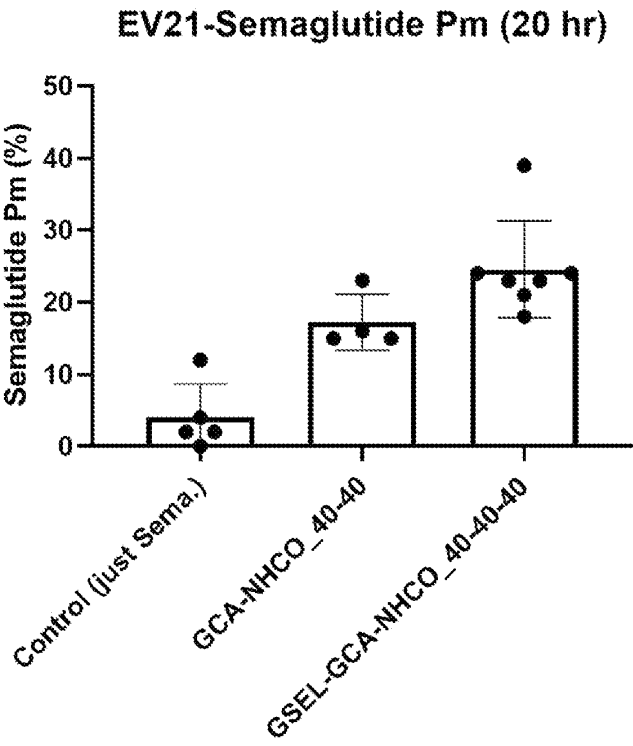
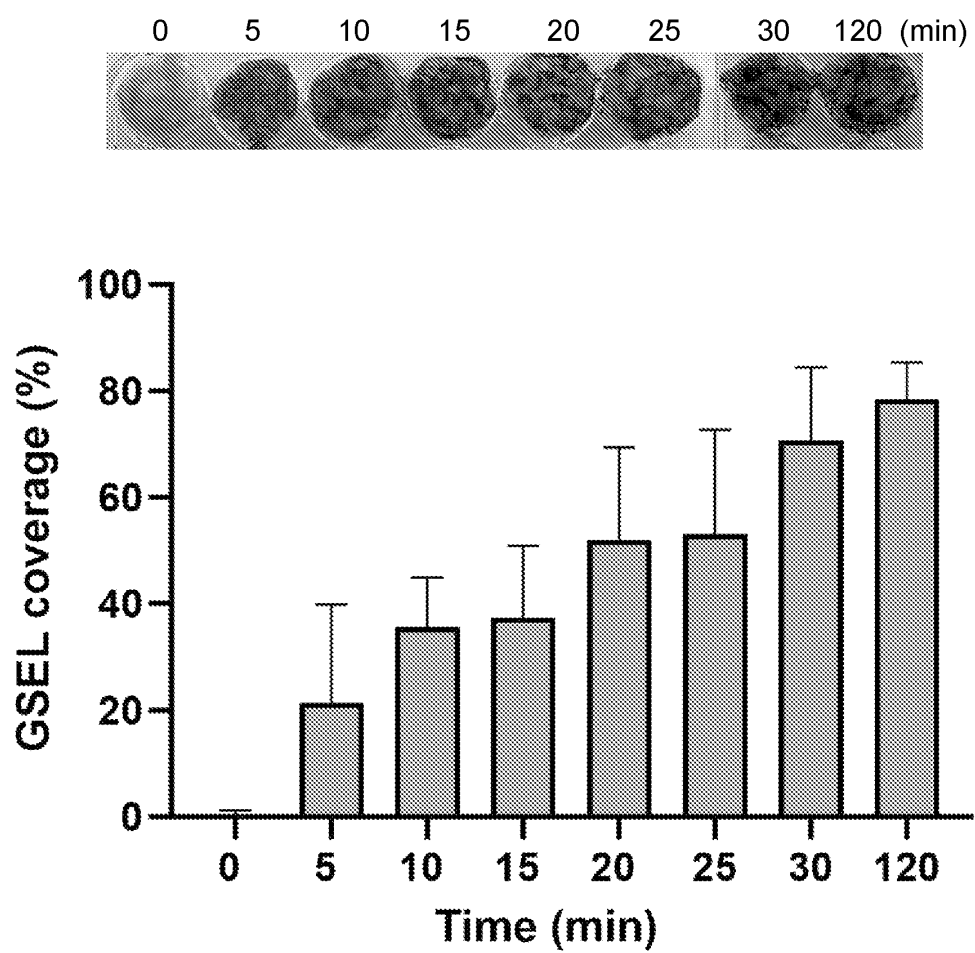


FIG. 13B

Semaglutide Pm (%)			
Time (hr)	Control (Semaglutide only)	GCA-NHCO_40-40	GSEL-GCA-NHCO_40-40-40
20	4.00	17.25	24.57

28/50

FIG. 14



29/50

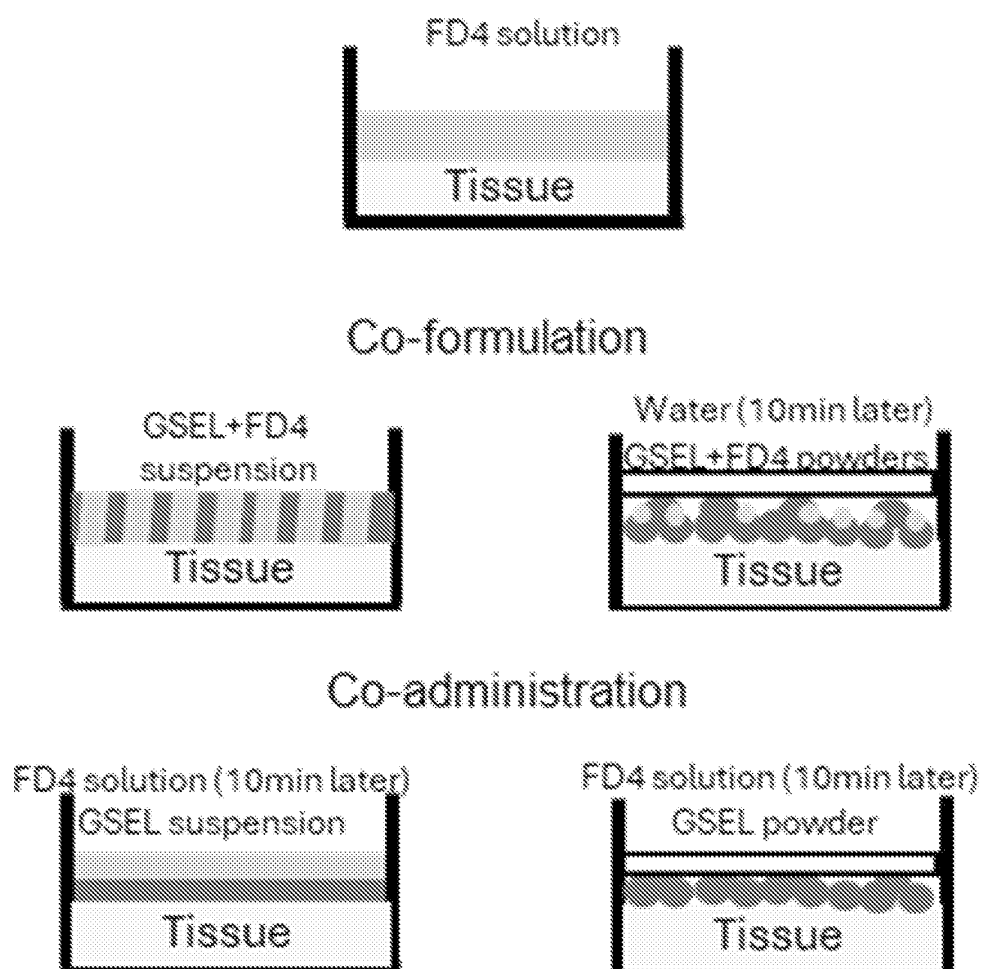


FIG. 15

30/50

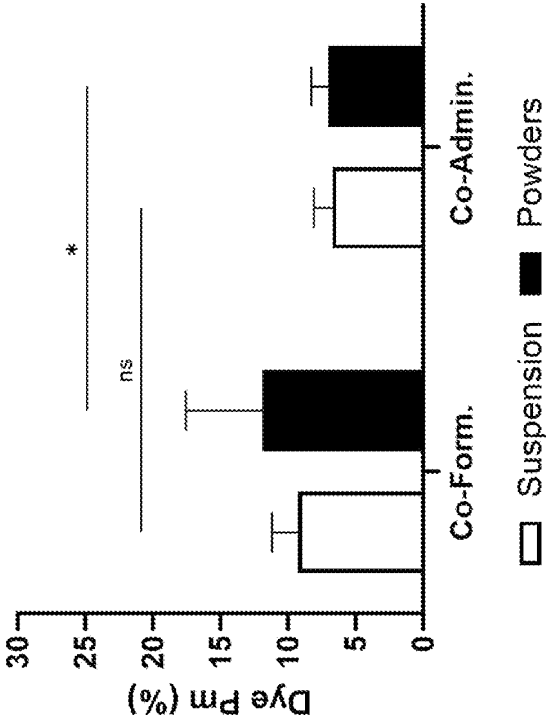


FIG. 17

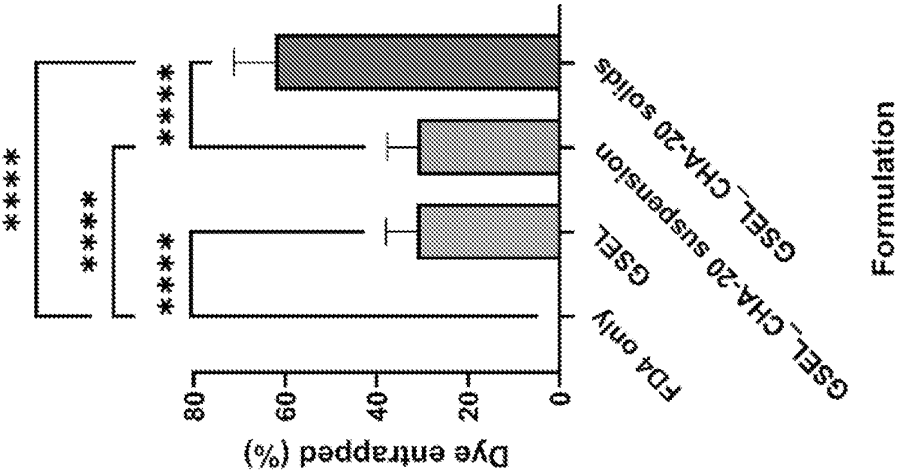


FIG. 16

31/50

FIG. 18A

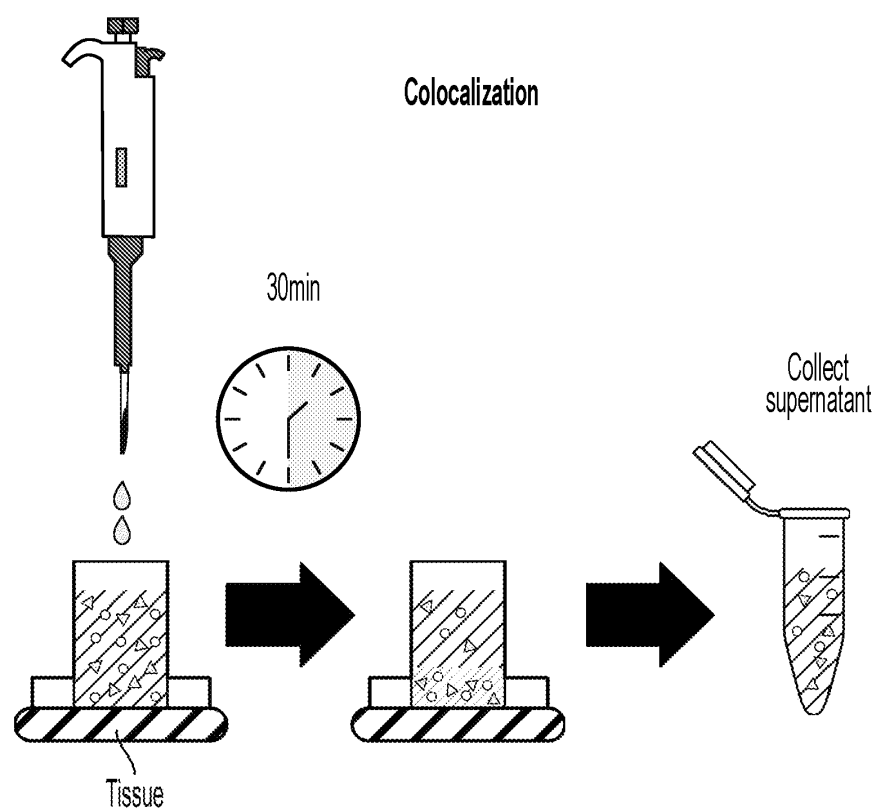
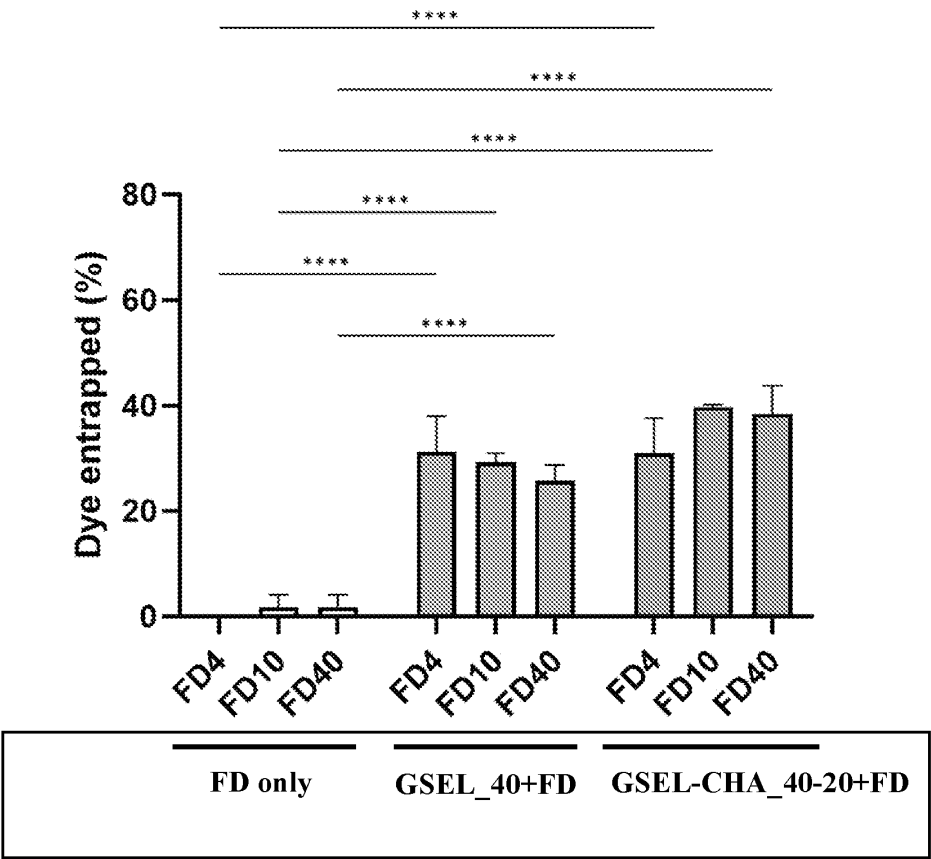


FIG. 18B



Dye entrapped (%)			
	FD only	GSEL_40+FD	GSEL-CHA_40-20 + FD
FD4	0	31.25	31
FD10	1.75	29.25	39.75
FD40	1.75	25.75	38.5

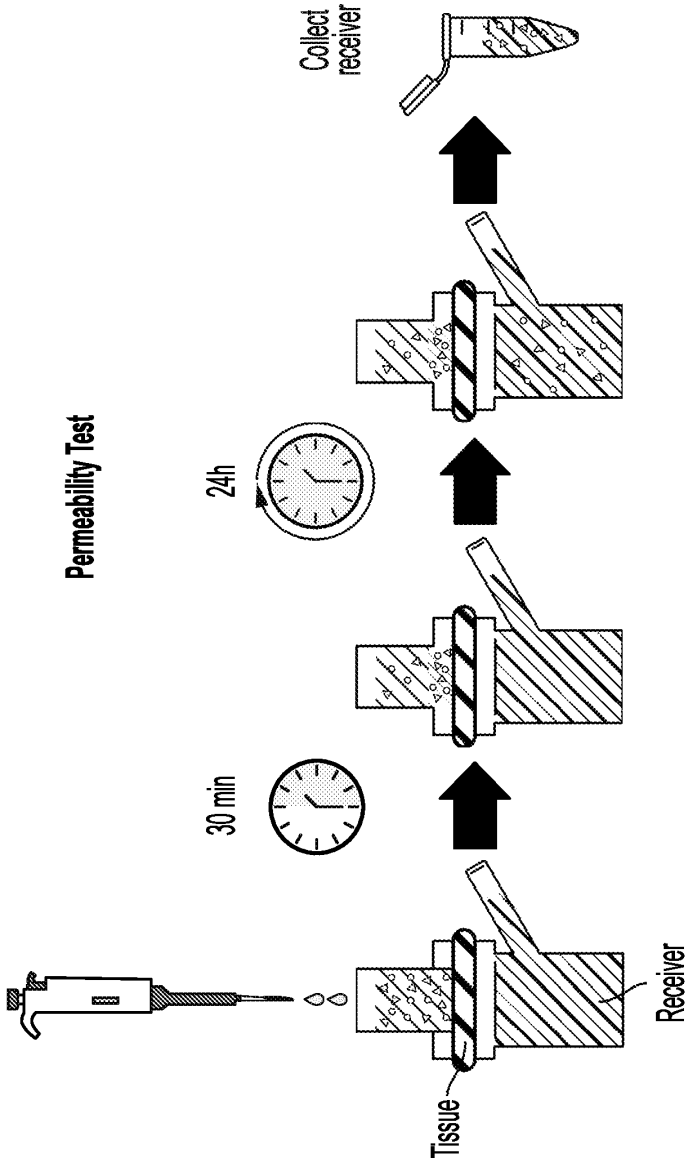
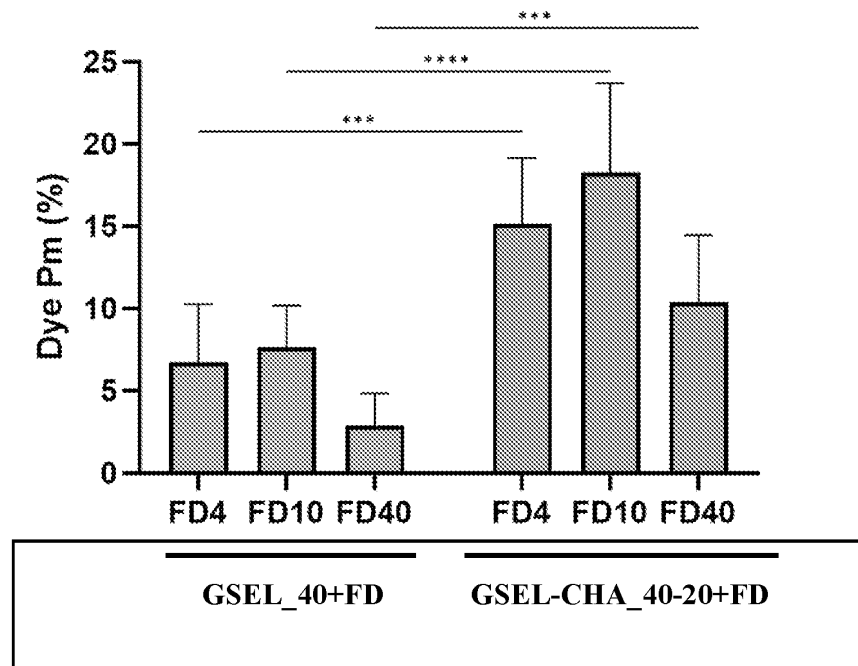


FIG. 19A

34/50

FIG. 19B



Dye Permeated Compared to Control (%)		
	GSEL_40+FD	GSEL-CHA_40-20 + FD
FD4	6.71	15.14
FD10	7.63	18.25
FD40	2.88	10.38

35/50

FIG. 20A

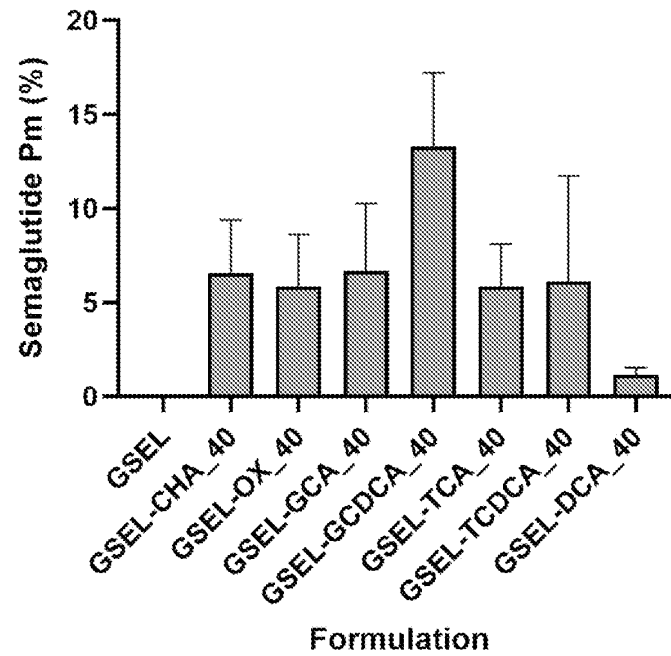


FIG. 20B

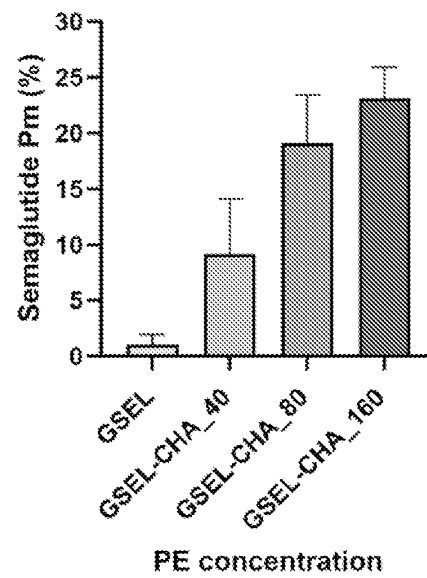


FIG. 21

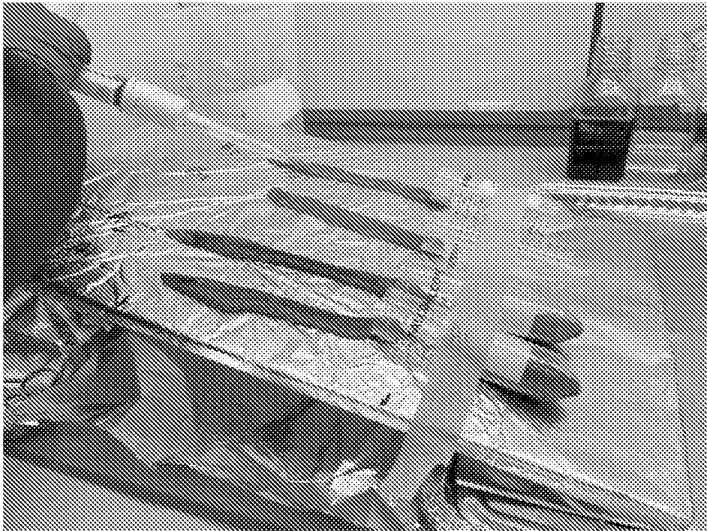


FIG. 22A

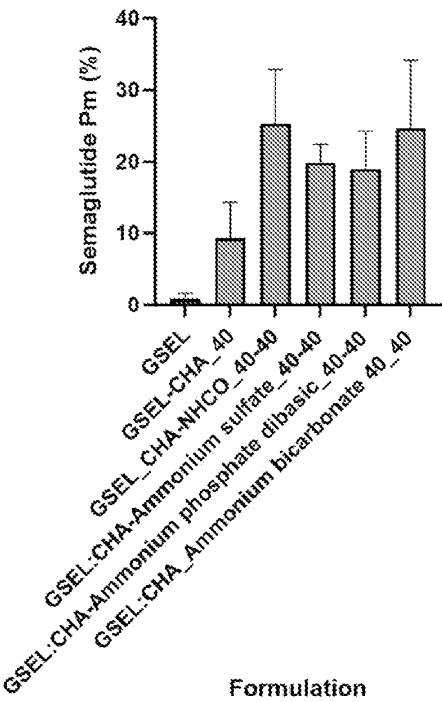
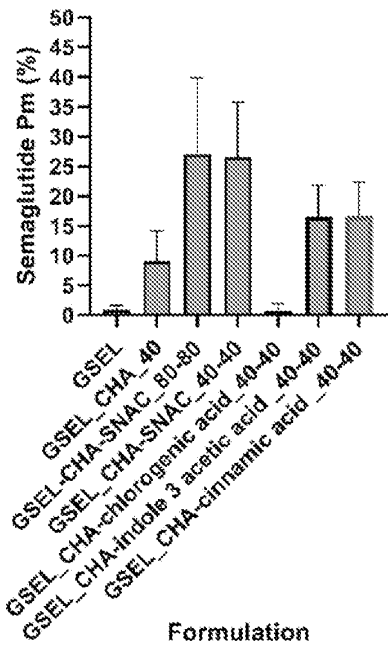


FIG. 22B



37/50

FIG. 22C

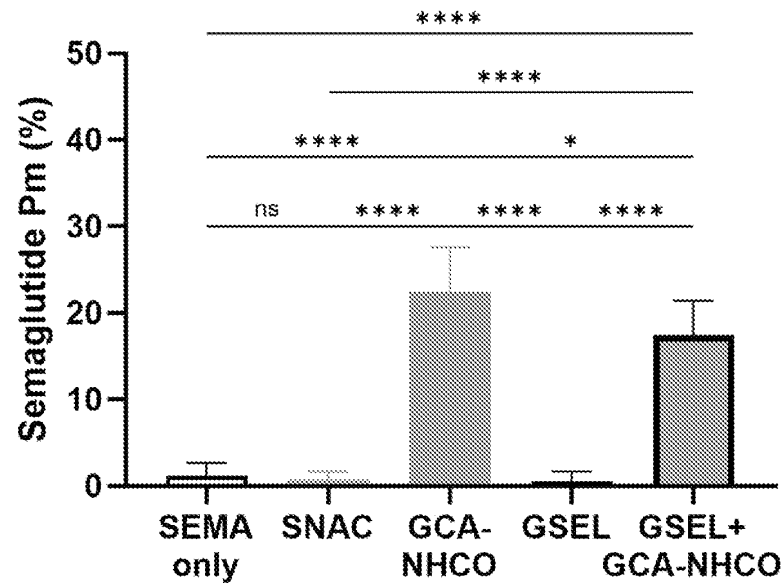


FIG. 22D

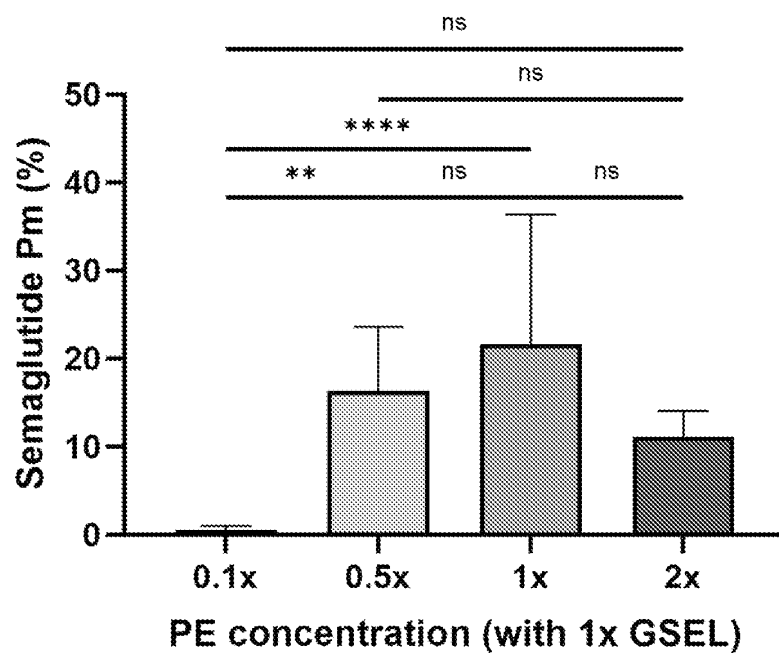


FIG. 22E

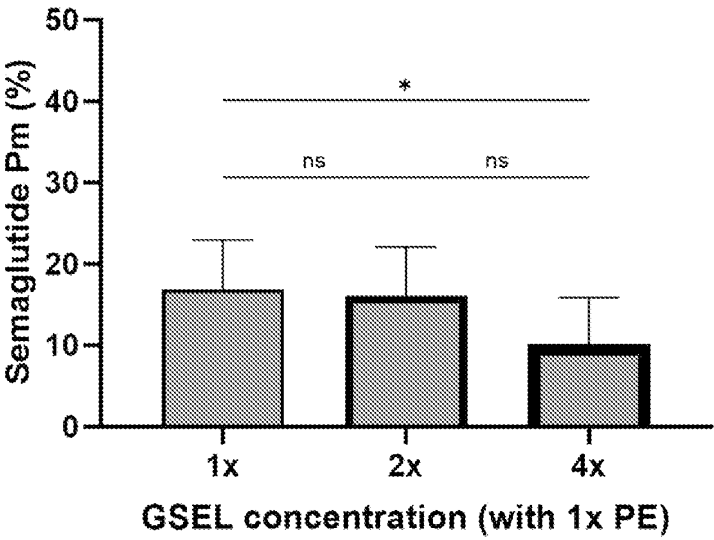


FIG. 22F

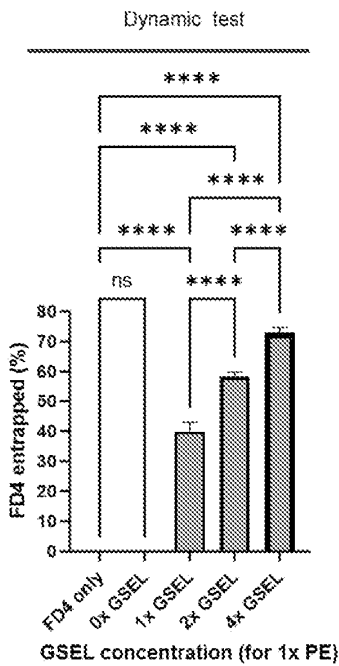
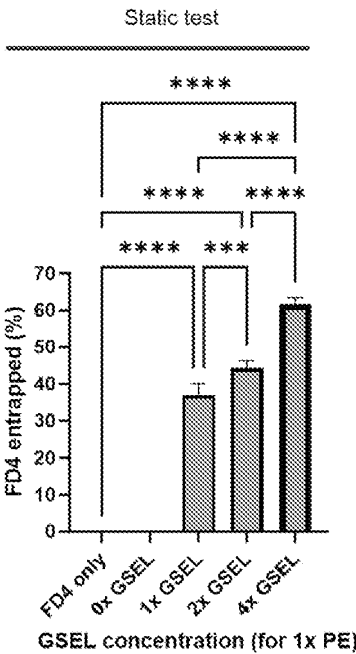


FIG. 22G



39/50

FIG. 22H

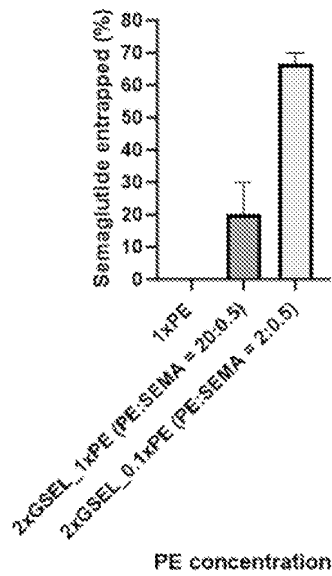


FIG. 22I

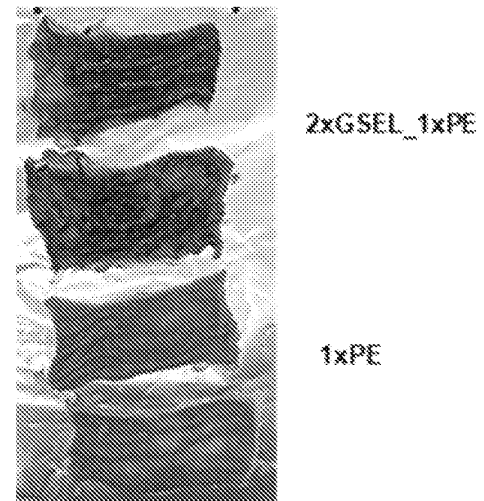
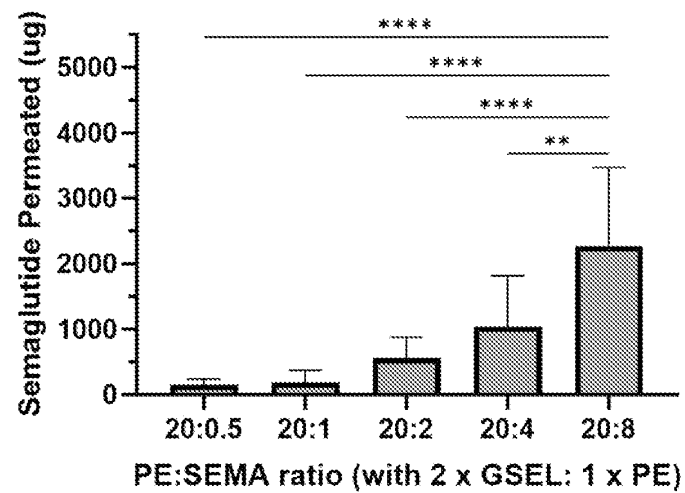


FIG. 22J



40/50

FIG. 22K

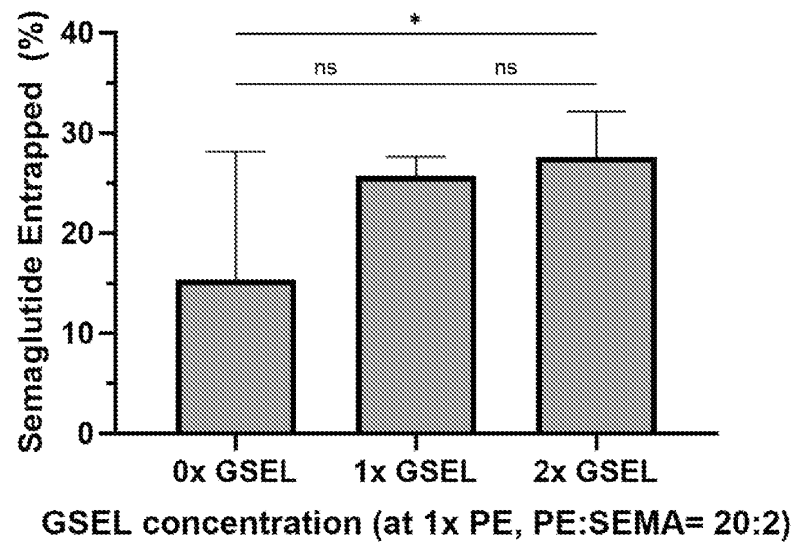
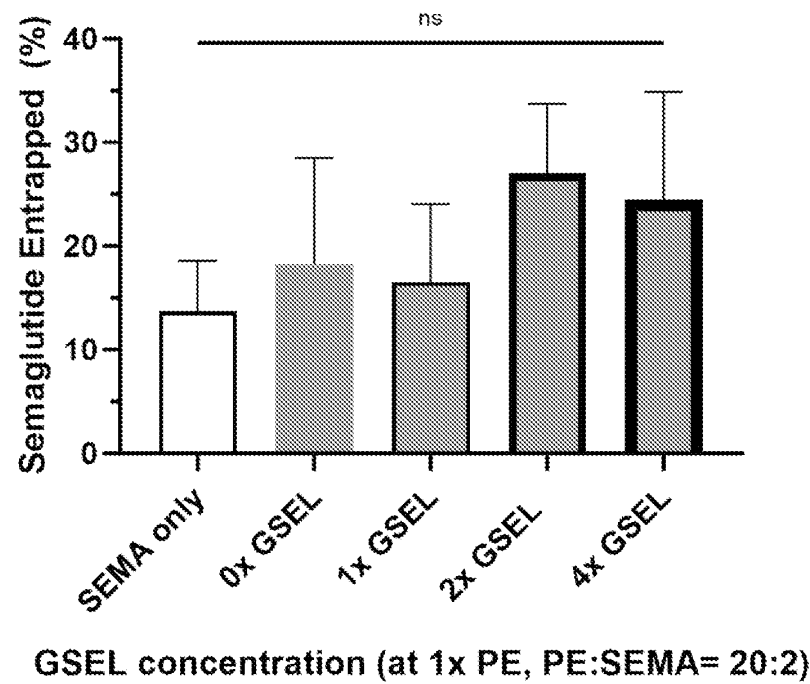
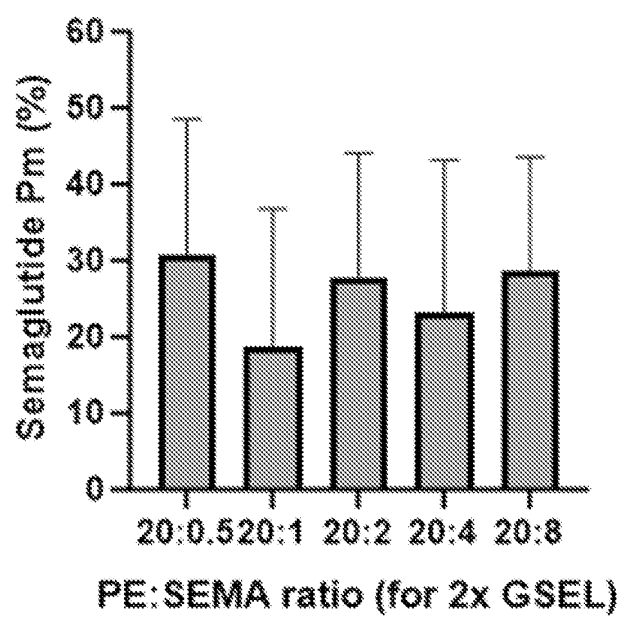


FIG. 22L



41/50

FIG. 22M



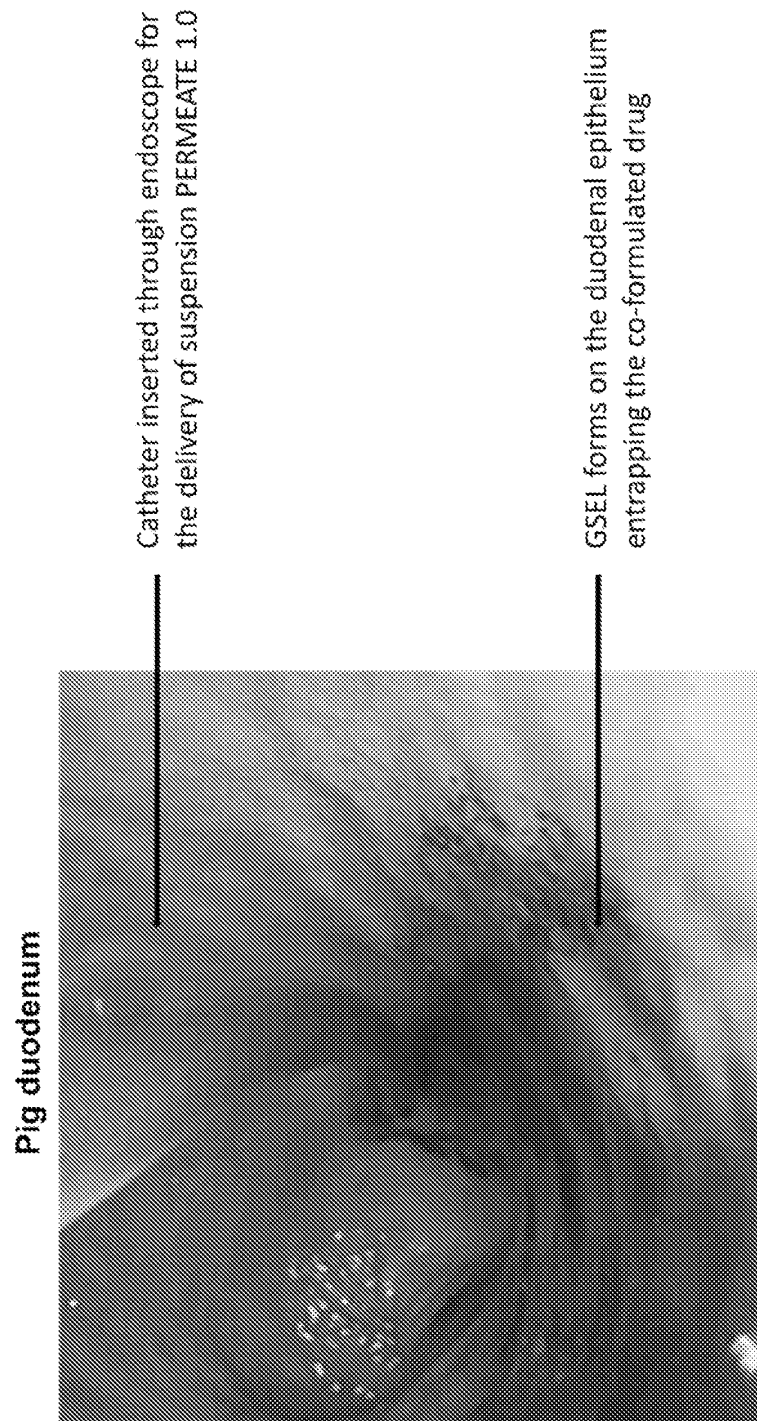


FIG. 23A

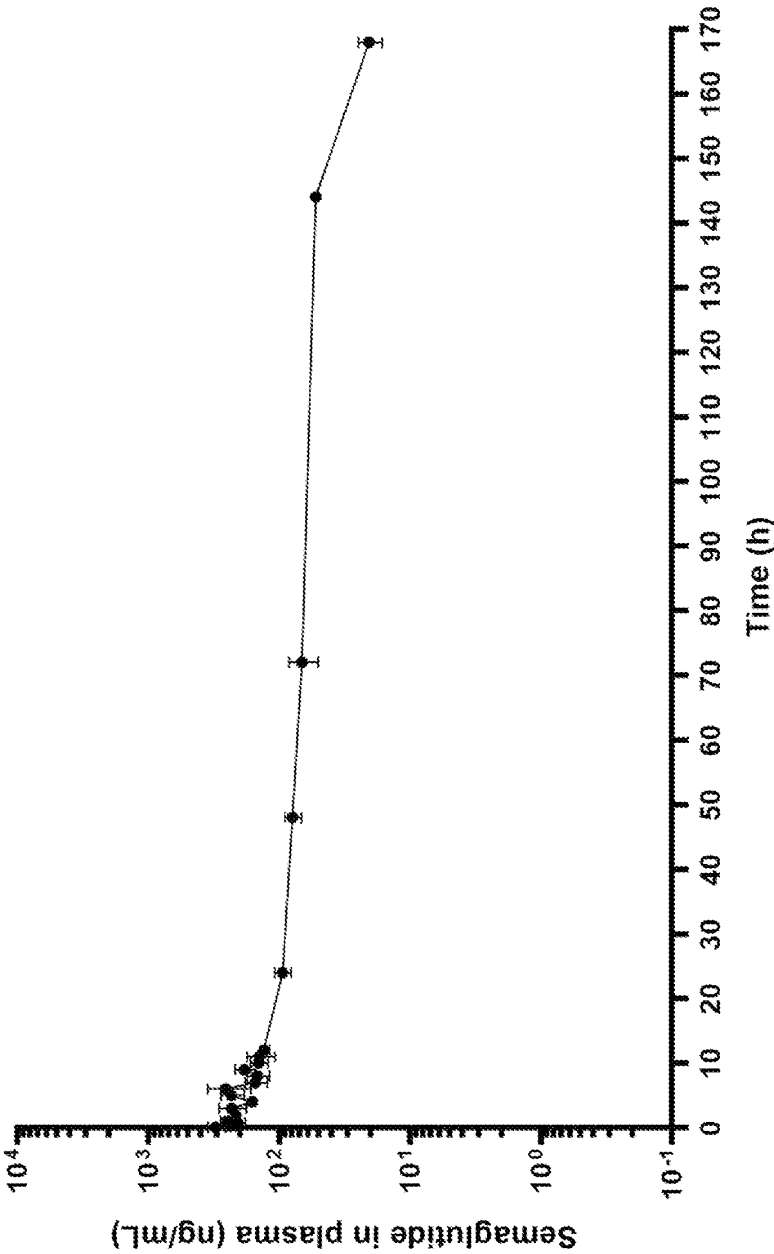


FIG. 23B

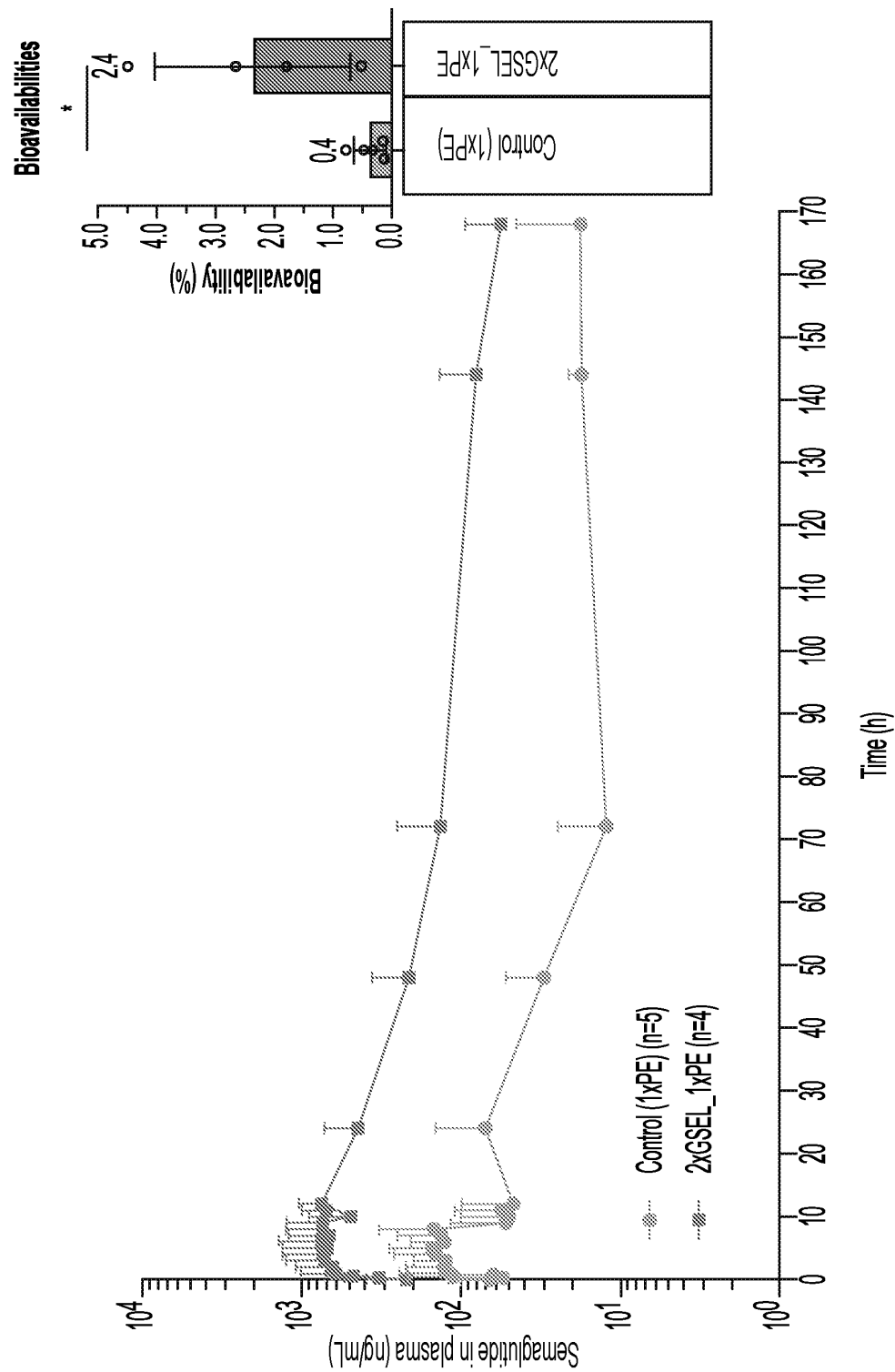


FIG. 23C

FIG. 23D

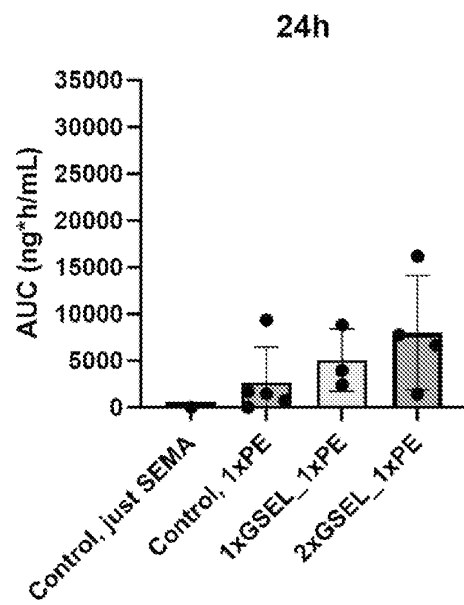
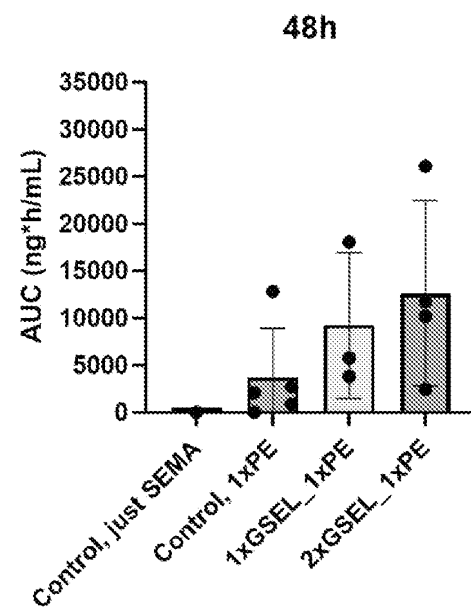
45/50
FIG. 23E

FIG. 23F

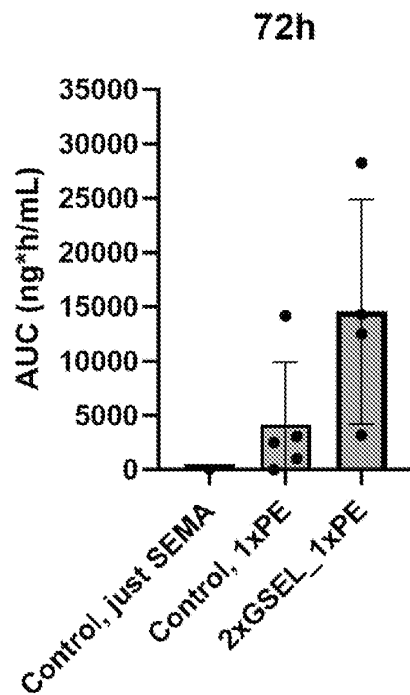
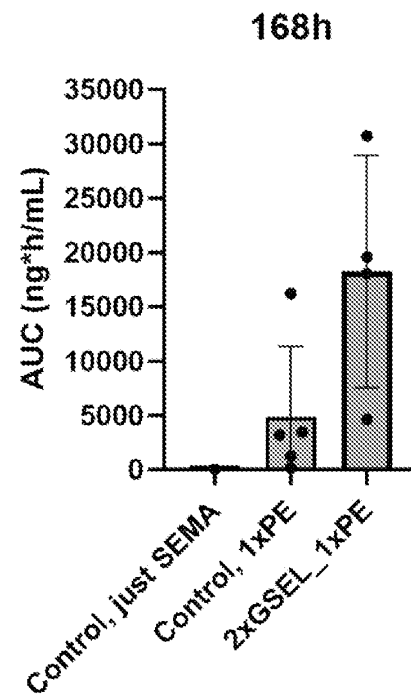
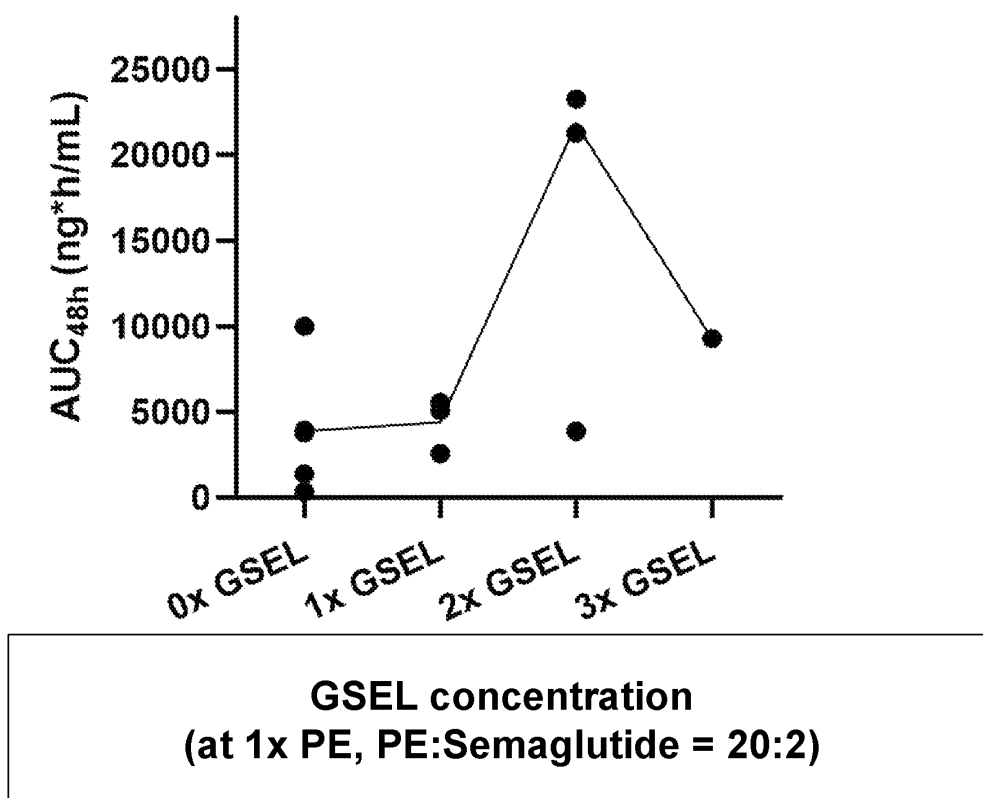


FIG. 23G



46/50

FIG. 24



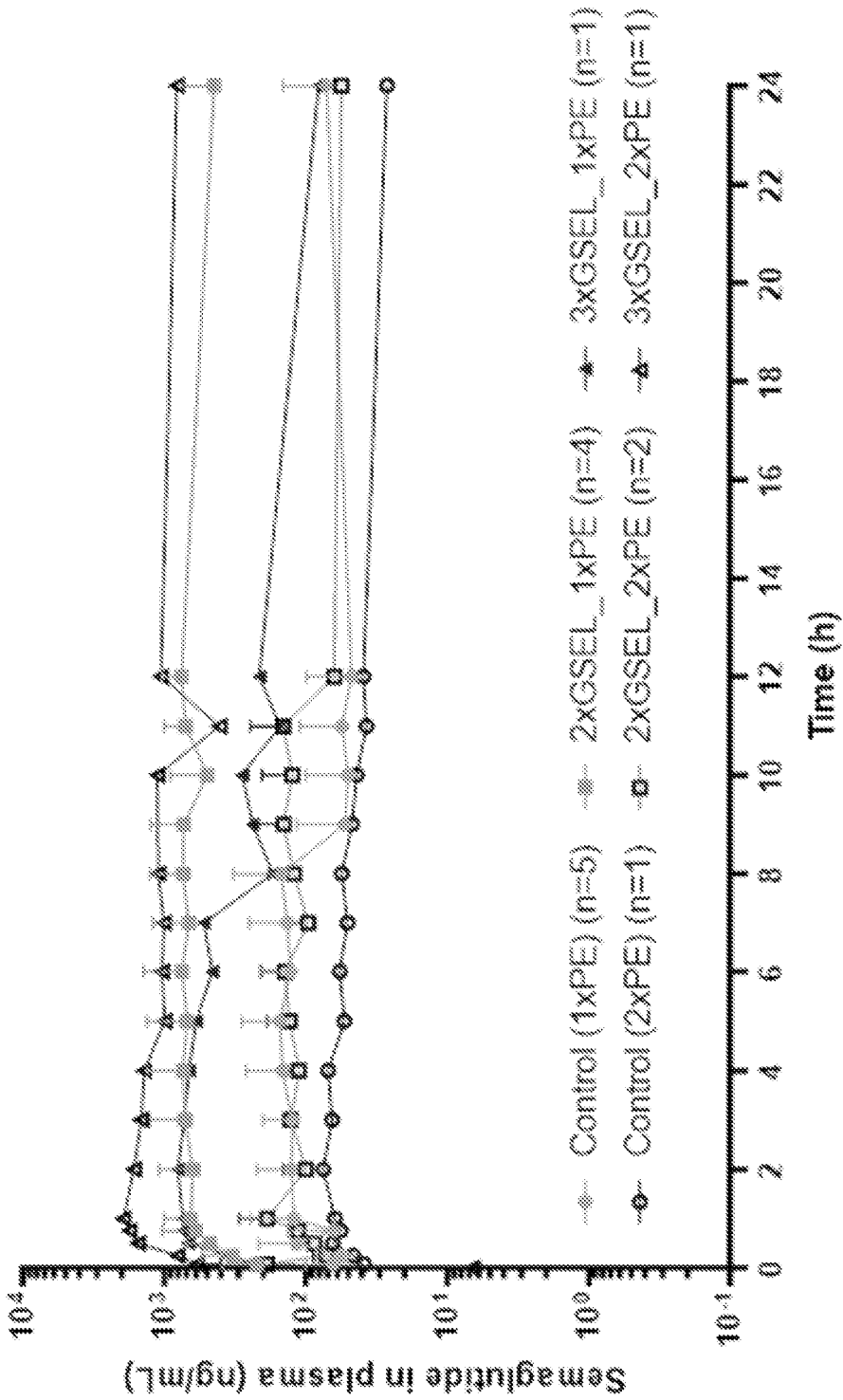
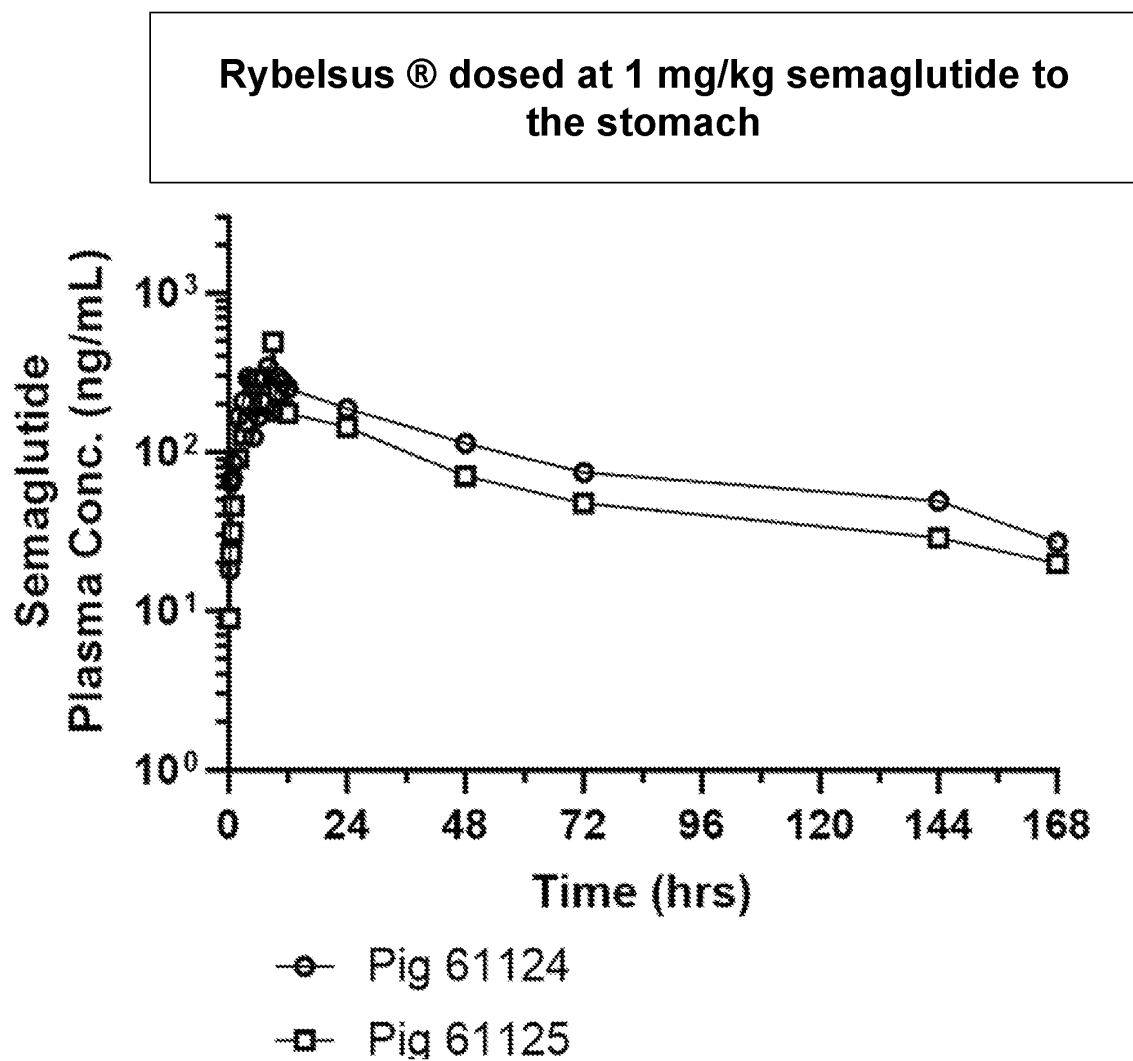


FIG. 25

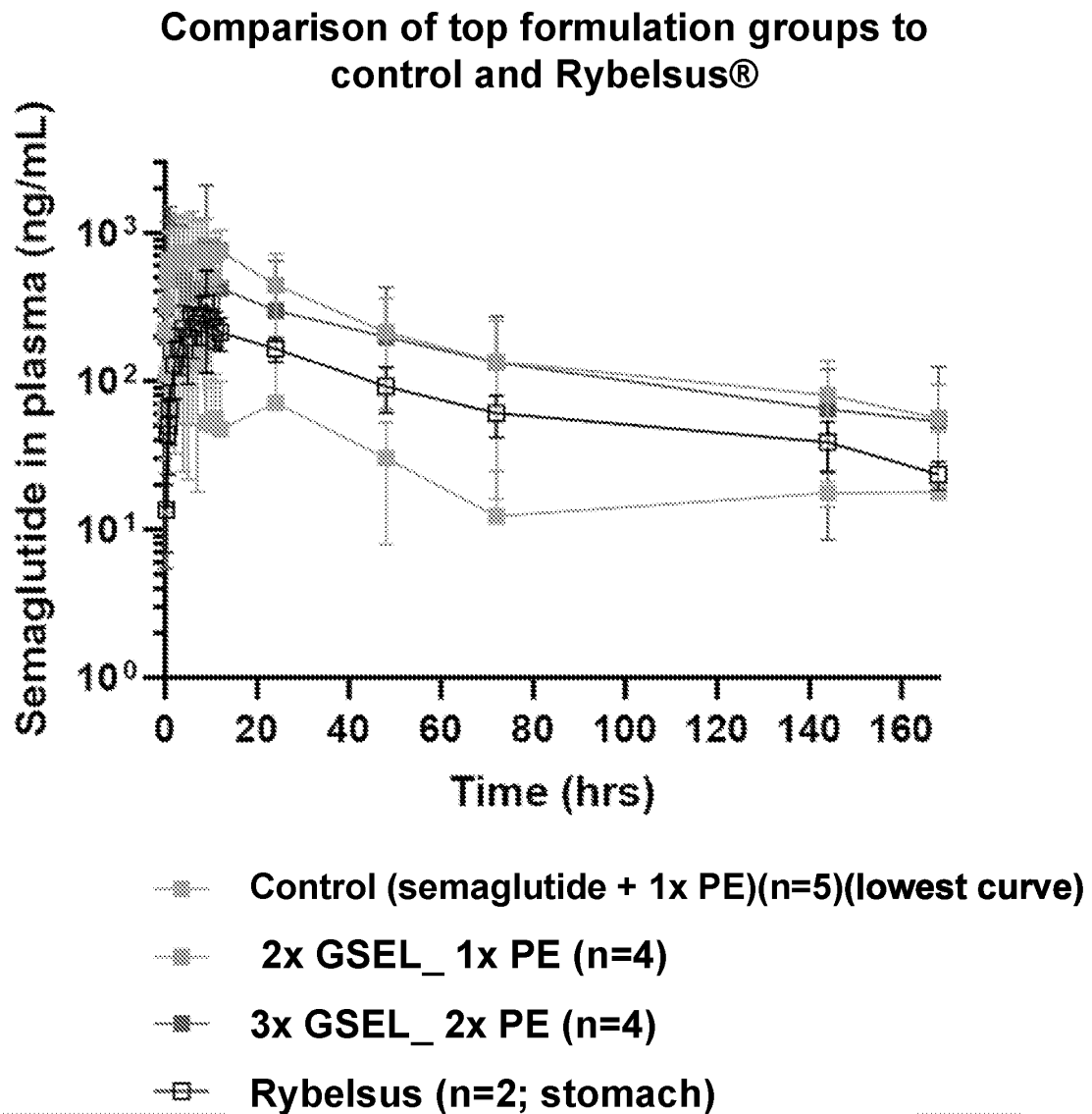
48/50

FIG. 26A



49/50

FIG. 26B



50/50

FIG. 26C

