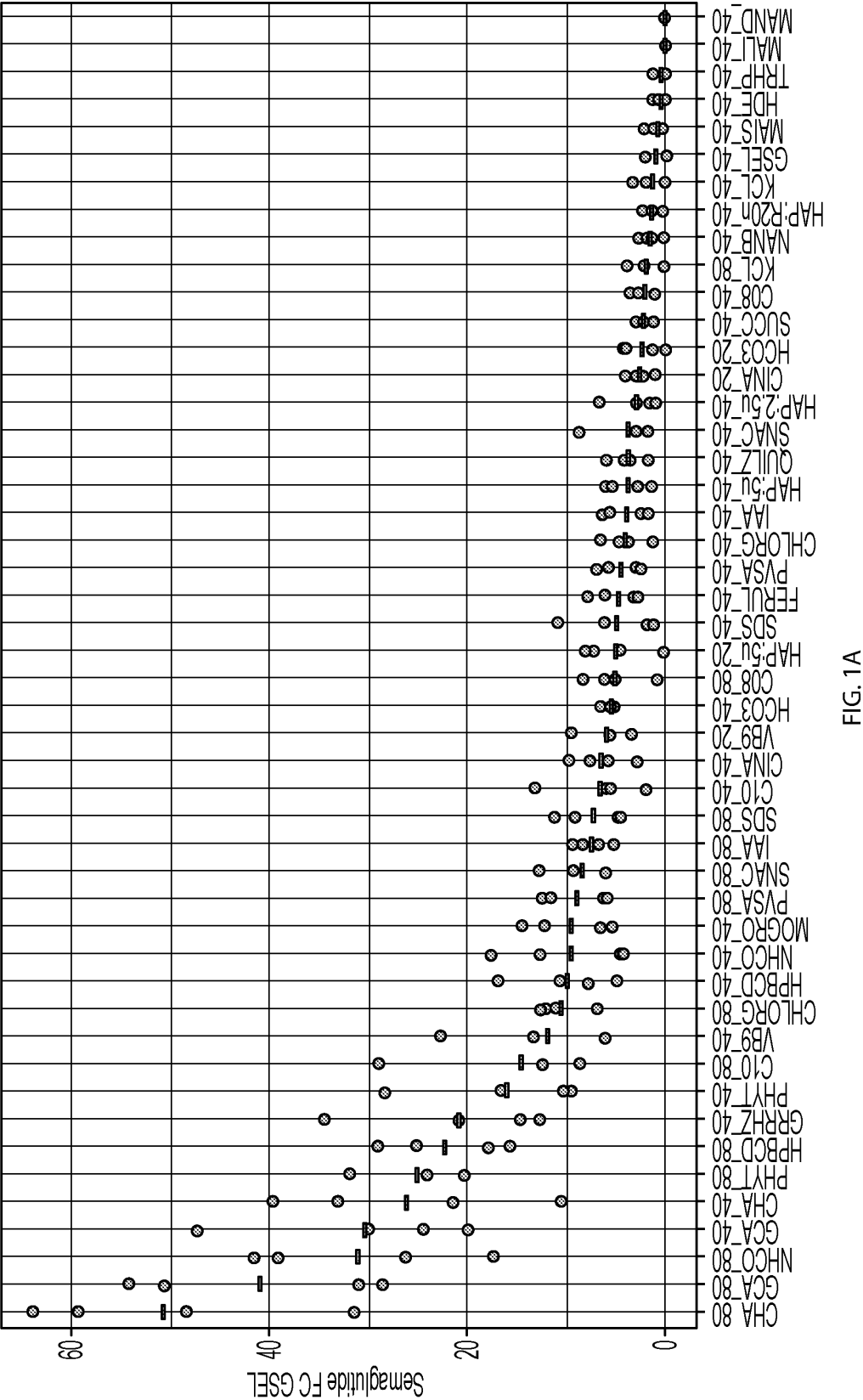




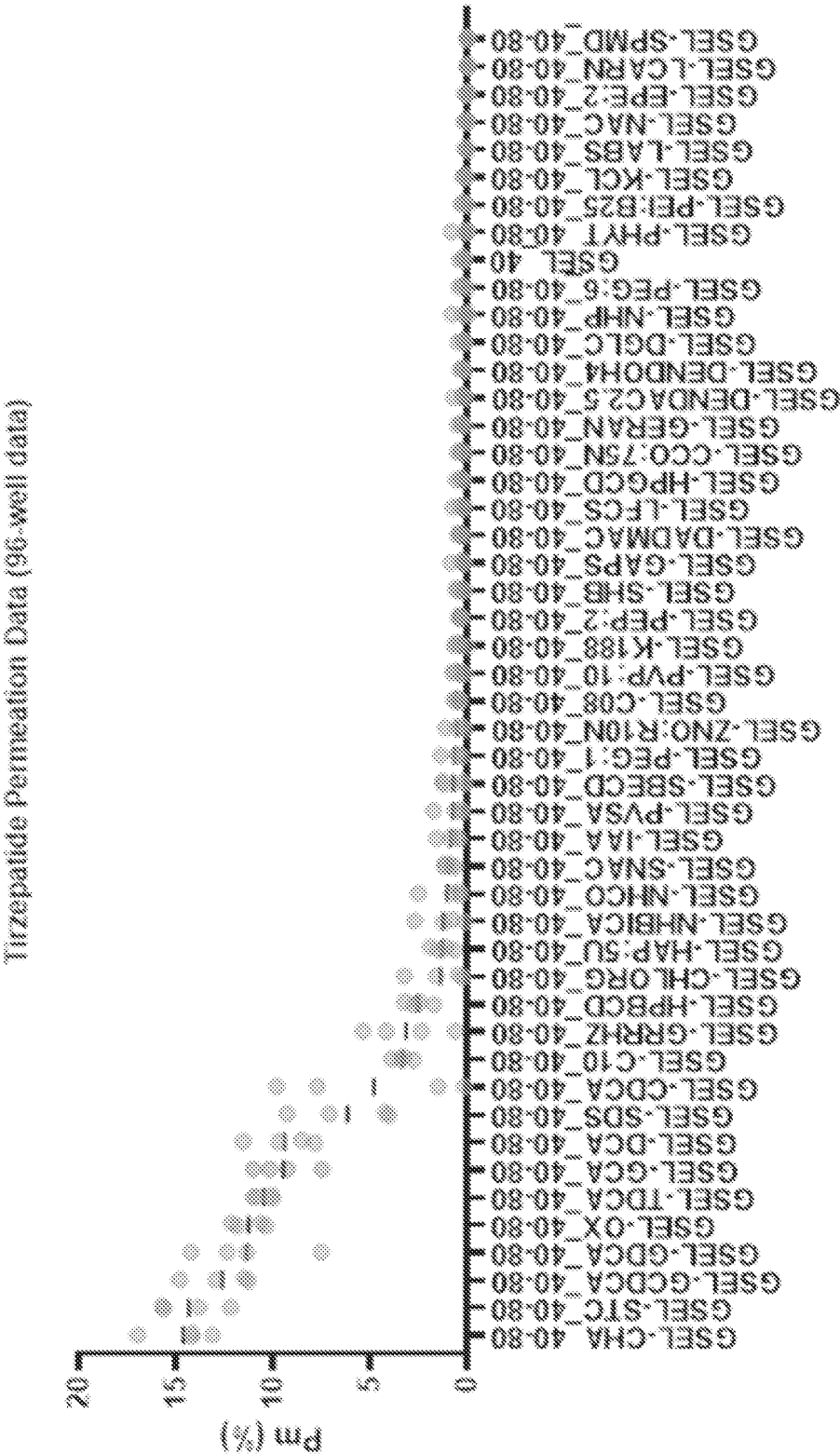


FIG. 1B

Semaglutide				
Formulation ID	Excipient	Pm	FC GSEL	CV
GSEL-GCA_40-40	Sodium Glycholate	5.64	70.08	31.34
GSEL-GCDCA_40-40	Sodium Glycochenodeoxycholate	4.95	61.46	53.89
GSEL-CHA_40-40	Sodium Cholate	4.71	58.55	65.58
GSEL-OX_40-40	Ox Bile	2.45	30.45	88.63
GSEL-C10_40-40	Sodium Decanoate	2.38	29.58	120.57
GSEL-HAP:5u_40-40	5um Hydroxyapatite	2.07	25.71	151.67
GSEL-SDS_40-40	Sodium Dodecyl Sulfate	2.03	25.20	125.64
GSEL-NHCO_40-40	Ammonium Carbonate	2.03	25.17	79.72
GSEL-CHAPS_40-40	CHAPS Hydrate	2.00	24.80	81.81
GSEL-HPBCD_40-40	2-Hydroxypropyl Beta Cyclodextrin	1.39	17.22	59.12
	Ethylenediaminetetraacetic Acid			
GSEL-EDTA_40-40	Tetrasodium Salt	1.29	16.01	100.88
GSEL-HCO3_40-40	Sodium Bicarbonate	1.10	13.64	140.85
	Sulfobutylated beta-cyclodextrin			
GSEL-SBEDCD_40-40	sodium salt	0.92	11.47	129.58
GSEL-VB9_40-40	Folic acid	0.78	9.65	24.86
GSEL-PHYT_40-40	Phytic Acid Sodium Salt Hydrate	0.73	9.08	81.20
GSEL-PVSA_40-40	Poly(vinylsulfonic acid) sodium salt	0.64	7.94	116.77
GSEL-CINA_40-40	Cinnamic acid sodium salt	0.59	7.34	93.30
GSEL-C08_40-40	Sodium octanoate	0.58	7.14	145.16
GSEL-CITR_40-40	Citric Acid	0.55	6.80	122.90
GSEL-IAA_40-40	Indole 3-acetic acid Sodium Salt	0.53	6.64	89.29
GSEL-SNAC_40-40	Salcaprozate Sodium	0.45	5.63	127.28
GSEL-KCL_40-40	Potassium Chloride	0.44	5.41	132.63
GSEL-CHLORG_40-40	Chlorogenic acid	0.43	5.29	80.43
GSEL-PEP:2_40-40	PPG-b-PEG-b-PPG 2K	0.42	5.18	140.90
GSEL-SHB_40-40	Sodium 4-hydroxybenzoate	0.40	5.03	95.11

FIG. 1C

Tirzepatide

Formulation ID	Excipient	Pm	FC GSEL	CV
GSEL-OX_40-40	Ox Bile	5.62	134.86	55.21
GSEL-CHAPS_40-40	CHAPS Hydrate	4.18	100.27	60.60
GSEL-NHCO_40-40	Ammonium Carbonate	3.40	81.60	69.65
GSEL-CHA_40-40	Sodium Cholate	3.26	78.13	35.61
GSEL-PHYT_40-40	Phytic Acid Sodium Salt Hydrate	2.91	69.95	65.34
GSEL-GCDCA_40-40	Sodium Glycochenodeoxycholate	2.34	56.11	54.27
GSEL-GCA_40-40	Sodium Glycholate	2.01	48.19	52.19
GSEL-POXZ:5_40-40	Poly(2-ethyl-2-oxazoline) 5K	1.63	39.13	122.27
GSEL-VB9_40-40	Folic add	1.41	33.74	58.69
GSEL-C10_40-40	Sodium Decanoate	1.30	31.26	84.31
GSEL-PVSA_40-40	Poly(vinylsulfonic acid) sodium salt	1.12	26.79	93.42
GSEL-CITR_40-40	Citric Acid	0.91	21.80	130.70
GSEL-C08_40-40	Sodium octanoate	0.88	21.04	103.85
GSEL-PEG:1_40-40	Poly(ethylene glycol) 1K	0.81	19.38	147.09
GSEL-CHLORG_40-40	Chlorogenic acid	0.77	18.41	134.01
	Sulfobutylated beta-cyclodextrin			
GSEL-SBECD_40-40	sodium salt	0.58	13.83	101.73
GSEL-IAA_40-40	Indole 3-acetic acid Sodium Salt	0.54	12.90	52.76
	Ethylenediaminetetraacetic Acid			
GSEL-EDTA_40-40	Tetrasodium Salt	0.54	12.88	38.88
GSEL-KCL_40-40	Potassium Chloride	0.47	11.29	126.93
	(2-Hydroxypropyl)-gamma-cyclodextrin			
GSEL-HPGCD_40-40	4.5 DS	0.46	11.14	106.99
GSEL-HCO3_40-40	Sodium Bicarbonate	0.39	9.32	45.99
GSEL-PVA:30_40-40	Poly(vinyl alcohol) 30-70k	0.37	8.92	200.00
GSEL-SHB_40-40	Sodium 4-hydroxybenzoate	0.29	6.89	100.43
GSEL-HPBCD_40-40	2-Hydroxypropyl Beta Cyclodextrin	0.28	6.79	29.26
	PAMAM Dendrimer Hydroxyl Surface			
GSEL-DENDOH4_40-40	Groups G4	0.26	6.35	126.08

FIG. 1D

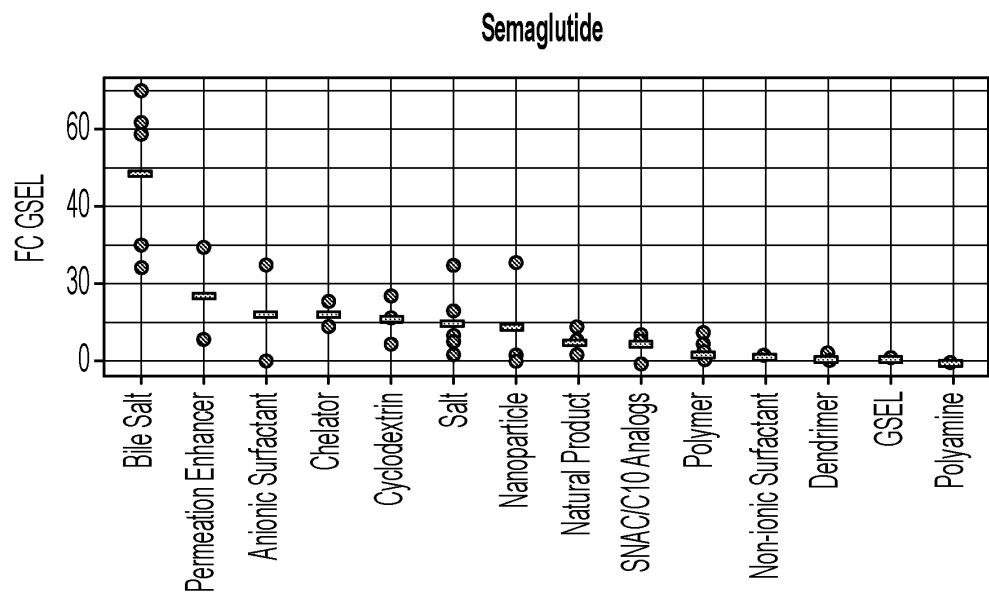


FIG. 2A

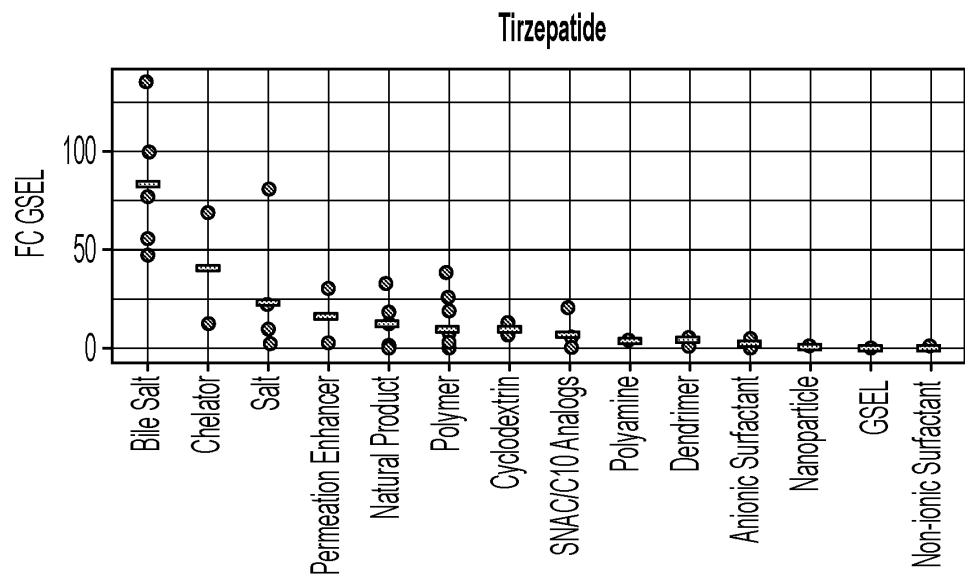
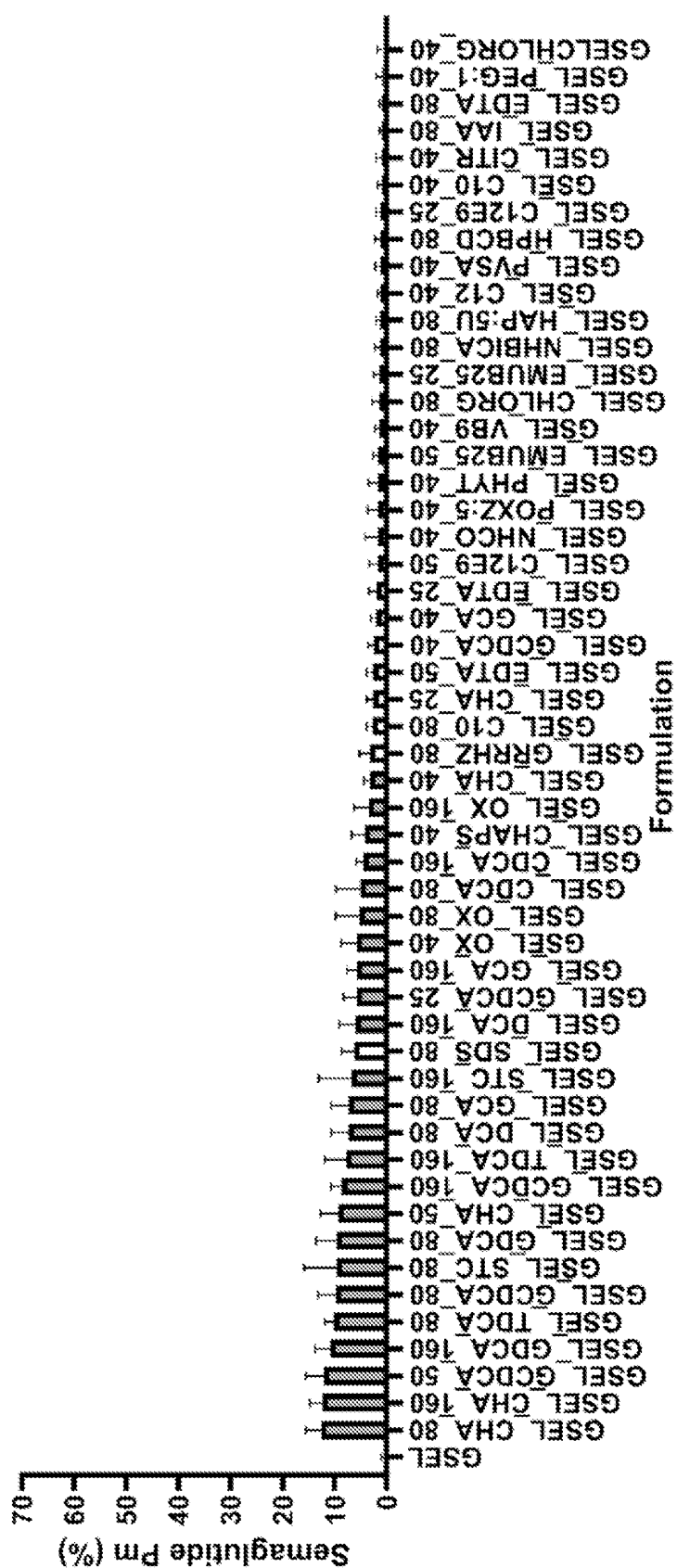
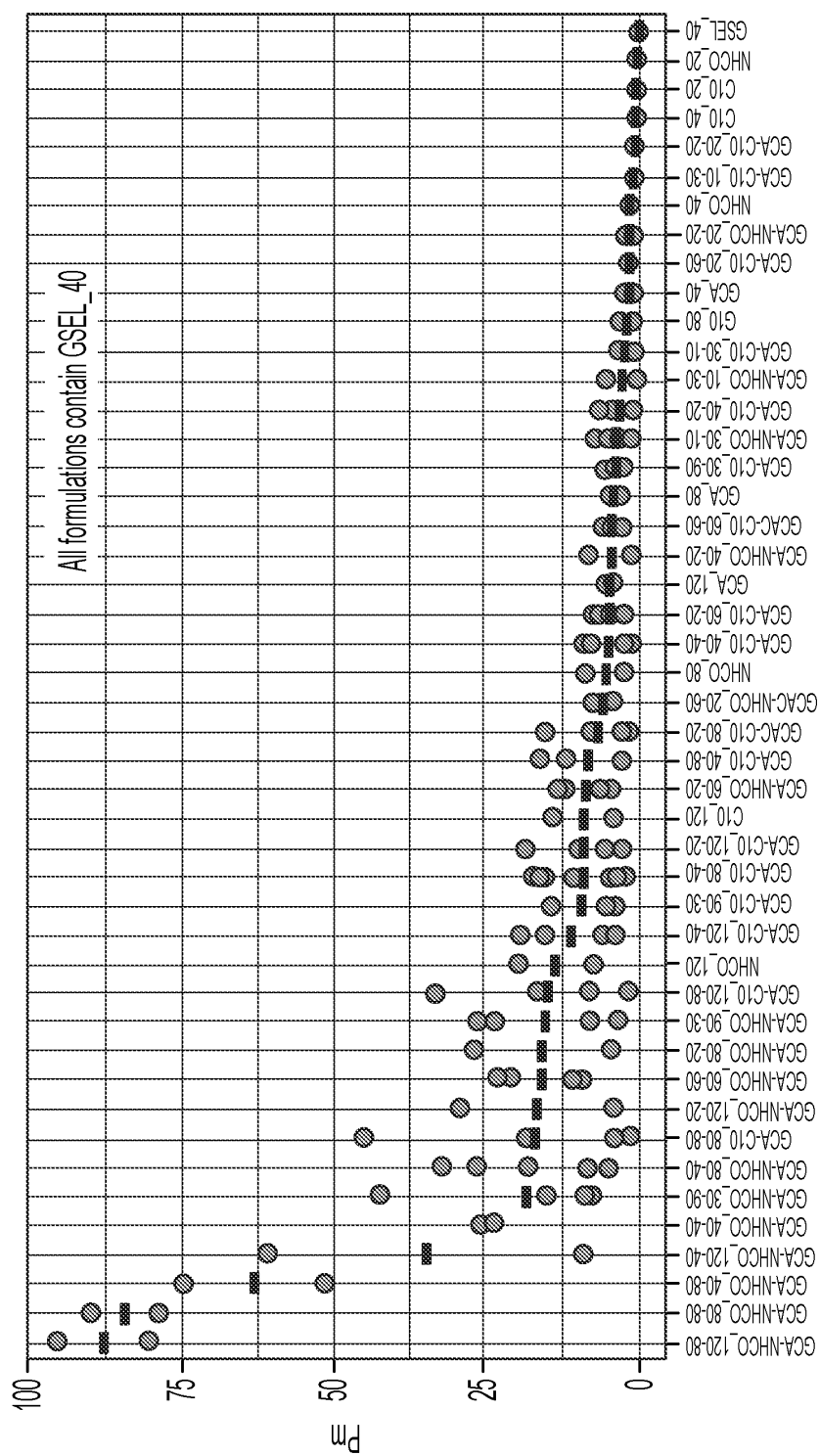


FIG. 2B





SUBSTITUTE SHEET (RULE 26)

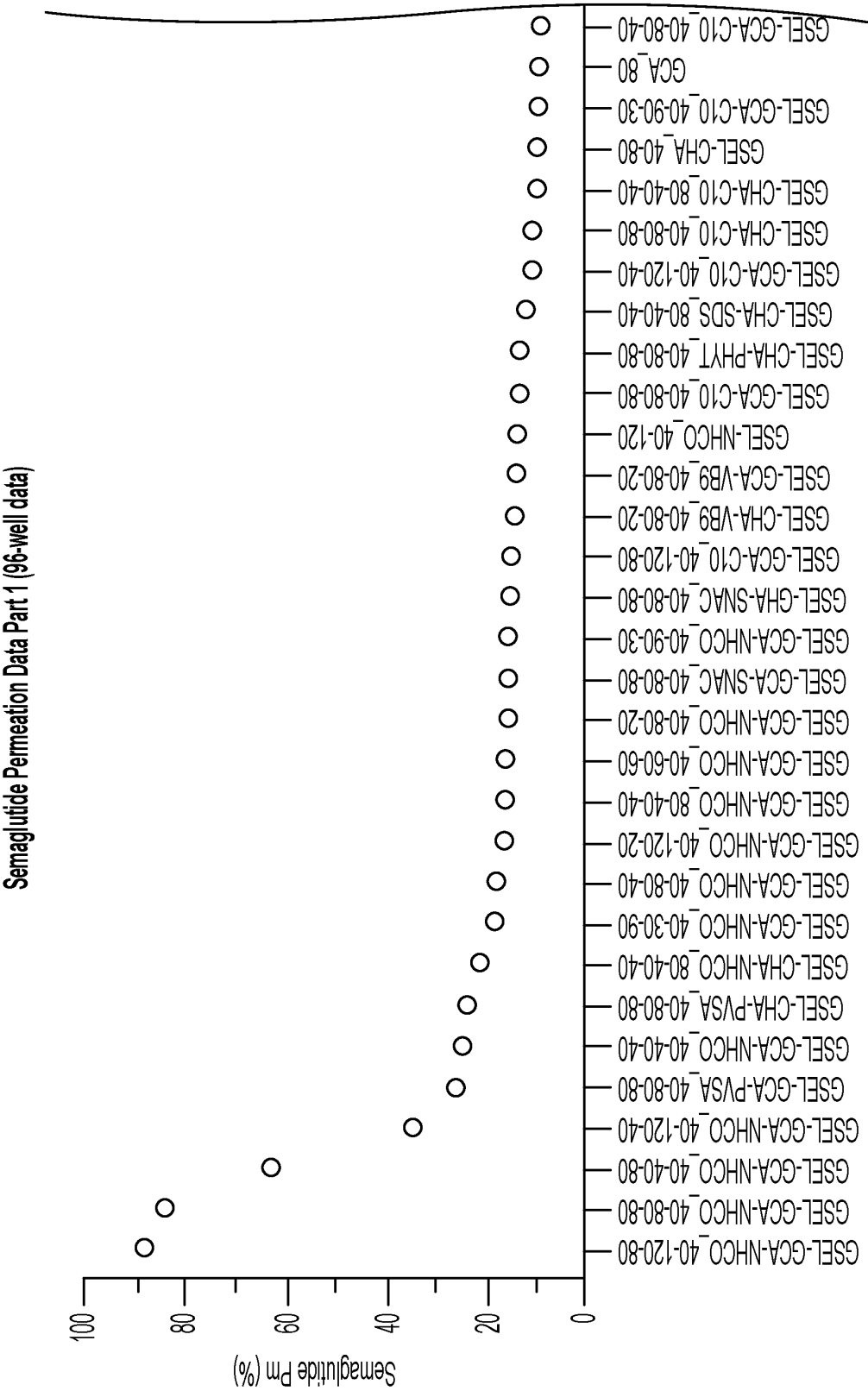


FIG. 4A

☐	GSEL-GCA-C10_40-120-20
☐	GSEL-GCA-SDS_80-40-40
☐	GSEL-C10_40-120
☐	GSEL-GCA-NHCO_40-60-20
☐	GSEL-GCA-C10_80-40-40
☐	GSEL-GCA-C10_40-40-80
☐	GSEL-GCA-C10_40-80-20
☐	GSEL-GCA_40-80
☐	GSEL-GCA-NHCO_40-20-60
☐	GSEL-CHA-HPBCD_40-80-80
☐	GSEL-NHCO_40-80
☐	GSEL-GCA-C10_40-40-40
☐	GSEL-GCA-C10_40-60-20
☐	GSEL-GDCA_40-40
☐	GSEL-GCA-HPBCD_40-80-80
☐	GSEL-GCA_40-120
☐	GSEL-GCA-NHCO_40-40-20
☐	GSEL-CHA_40-40
☐	GSEL-GCA_40-40
☐	GSEL-GCA-C10_40-60-60
☐	GSEL-GCA-C10_40-30-90
☐	GSEL-C10-PVSA_40-80-80
☐	GSEL-GCA-NHCO_40-30-10
☐	GSEL-C10-SNAC_40-80-80
☐	GSEL-GRHZ_40-40
☐	GSEL-GCA-C10_40-40-20
☐	GSEL-C10-VB9_40-80-20
☐	GSEL-C10-PVSA_40-40-80
☐	GSEL-GCA-NHCO_40-10-30
☐	GSEL-C10-SDS_80-40-40
☐	GSEL-OX_40-40
☐	GSEL-C10-HPBCD_40-80-80
☐	GSEL-GCA-C10_40-30-10
☐	GSEL-C10-SDS_40-40-40

FIG. 4A
CONTINUED

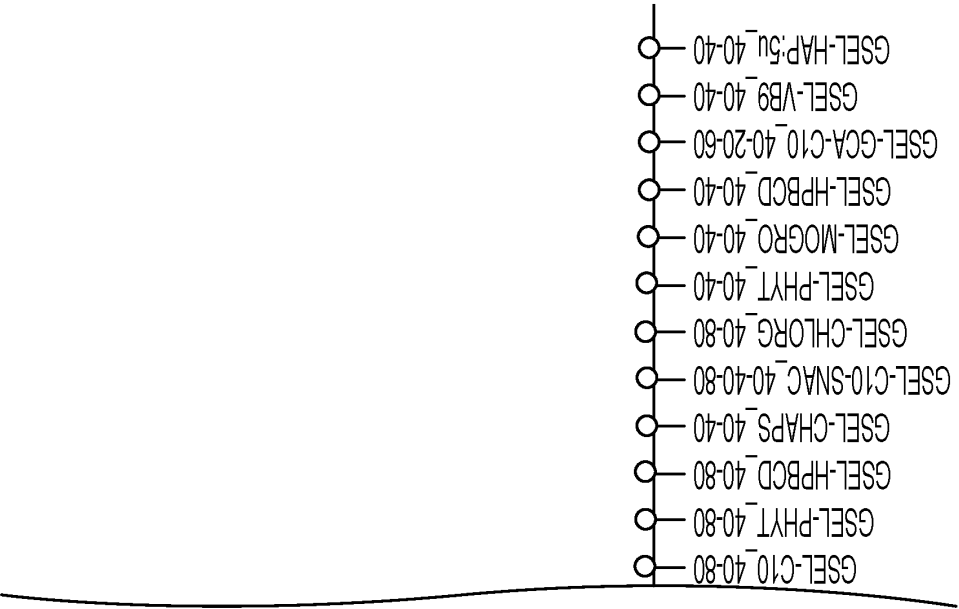


FIG. 4A
CONTINUED

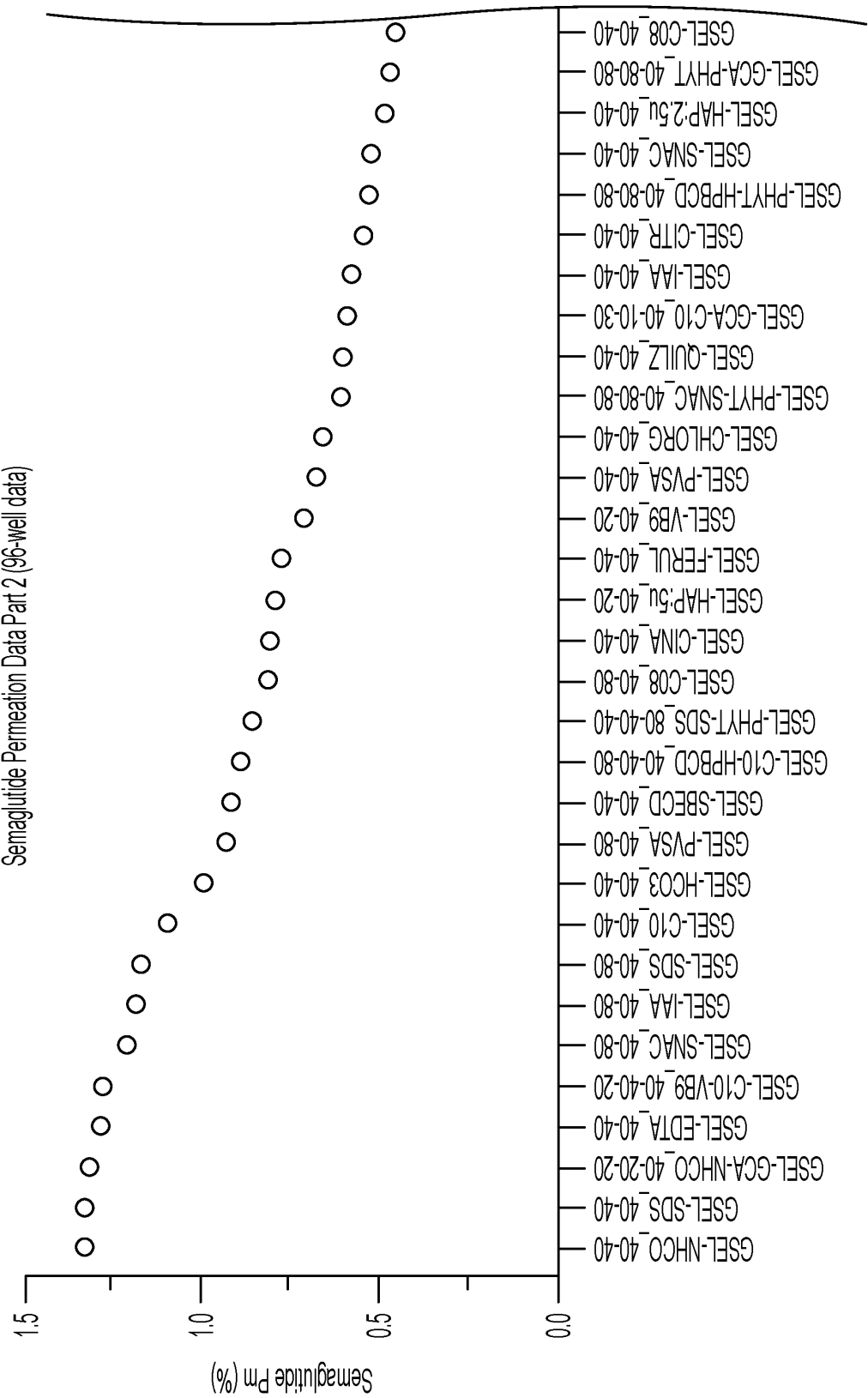


FIG. 4B

○	GSEL-PEG:1_40-40
○	GSEL-LABS_40-40
○	GSEL-NHCO_40-20
○	GSEL-HDE_40-40
○	GSEL-C10_40-20
○	GSEL-PHYT-C10_80-40-40
○	GSEL-MAIS_40-40
○	GSEL-PHYT-VB9_40-80-20
○	GSEL-CCO:75n_40-40
○	GSEL-DADMAC_40-40
○	GSEL-EPE:2_40-40
○	GSEL-CHLORG_40-40
○	GSEL-CACL_40-40
○	GSEL-PHYT-PVSA_40-80-80
○	GSEL-PEG:6_40-40
○	GSEL-GAPS_40-40
○	GSEL-LFCS_40-40
○	GSEL-GSEL_40-40
○	GSEL-HAP:R20n_40-40
○	GSEL-PVA:30_40-40
○	GSEL-DENDAC2.5_40-40
○	GSEL-NANB_40-40
○	GSEL-PVP:10_40-40
○	GSEL-PHYT-C10_40-80-80
○	GSEL-KCL_40-40
○	GSEL-KCL_40-80
○	GSEL-GCA-C10_40-20-20
○	GSEL-SUCC_40-40
○	GSEL-HPGCD_40-40
○	GSEL-HCO3_40-20
○	GSEL-DGLC_40-40
○	GSEL-SHB_40-40
○	GSEL-CINA_40-20
○	GSEL-PEP:2_40-40

FIG. 4B
CONTINUED

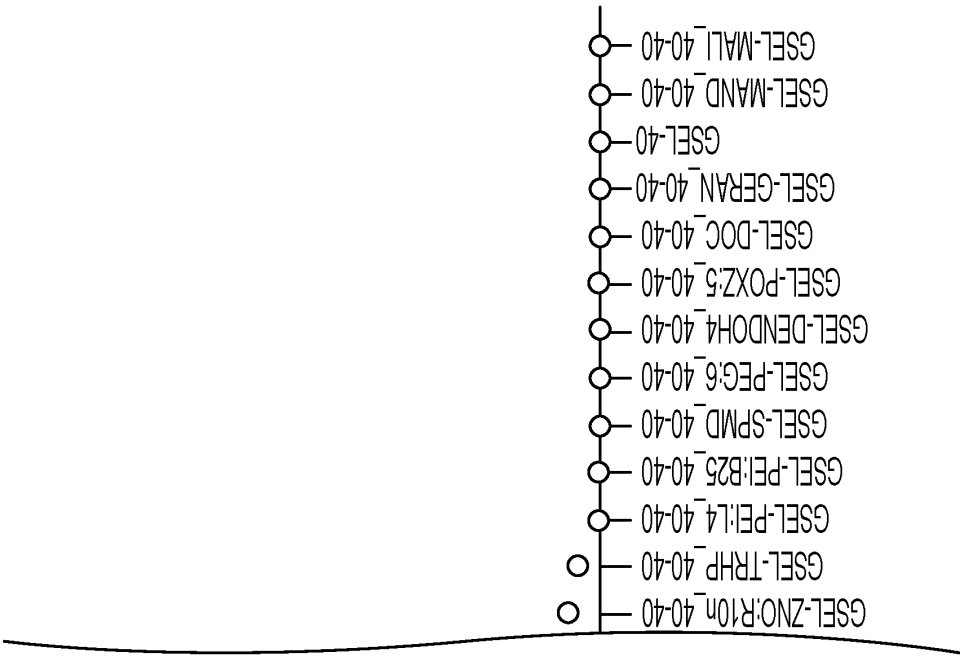
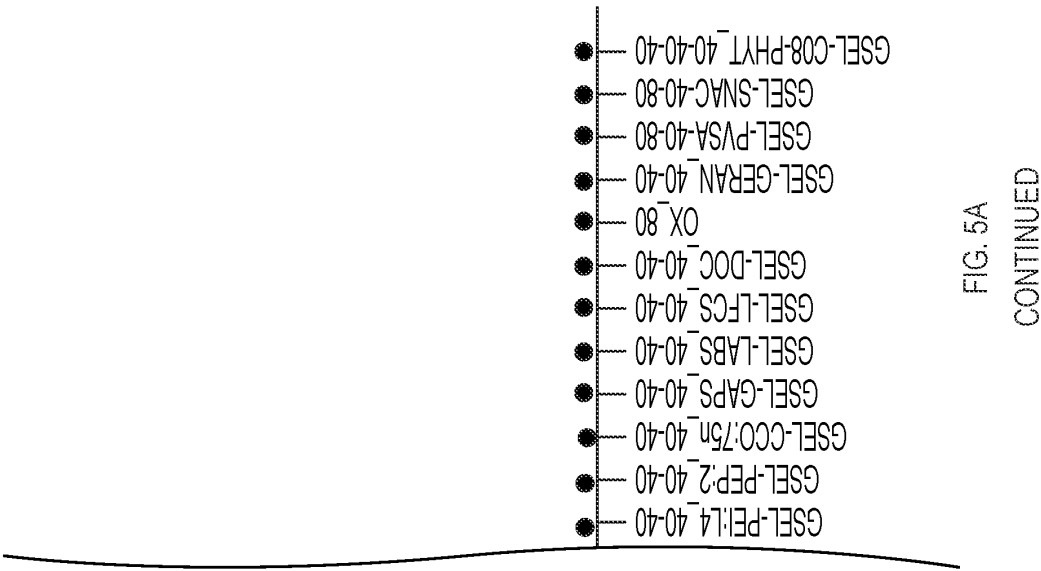


FIG. 4B
CONTINUED



	GSEL-40
	GSEL-ZNO:R10n_40-40
	GSEL-DENDAC2.5_40-40
✓	GSEL-EPE:2_40-40
	GSEL-HAP:5u_40-40
	GSEL-PEI:B25_40-40
	GSEL-HPBCD_40-80
	GSEL-DGCLC_40-40
	GSEL-CINA_40-40
	GSEL-PEG:6_40-40
	GSEL-CACL_40-40
	GSEL-SNAC_40-40
	GSEL-PHYT-SNAC_40-40-80
	GSEL-PVP:10_40-40
	GSEL-DADMAC_40-40
	GSEL-PHYT-PVSA_40-40-80
	GSEL-C10-VB9_40-40-20
	GSEL-SPMD_40-40
	GSEL-C10-PVSA_40-40-80
	GSEL-VB9_40-20
	GSEL-SDS_40-40
	GSEL-C10-SNAC_40-40-80
	GSEL-DENDOH4_40-40
	GSEL-PHYT-VB9_40-40-20
	GSEL-C10-SNAC_40-80-80
	GSEL-HPBCD_40-40
	GSEL-SHB_40-40
	GSEL-C10-HPBCD_40-80-40
	GSEL-C10-PHYT_40-80-40
	GSEL-C10-PHYT_40-40-40
	GSEL-C10-C08_40-40-40
	GSEL-PVA:30_40-40
	GSEL-HCO3_40-40
	GSEL-C10-C08_40-80-40
	GSEL-C08_40-40
	GSEL-C10-VB9_40-80-20
	GSEL-HPGCD_40-40

FIG. 5A
CONTINUED



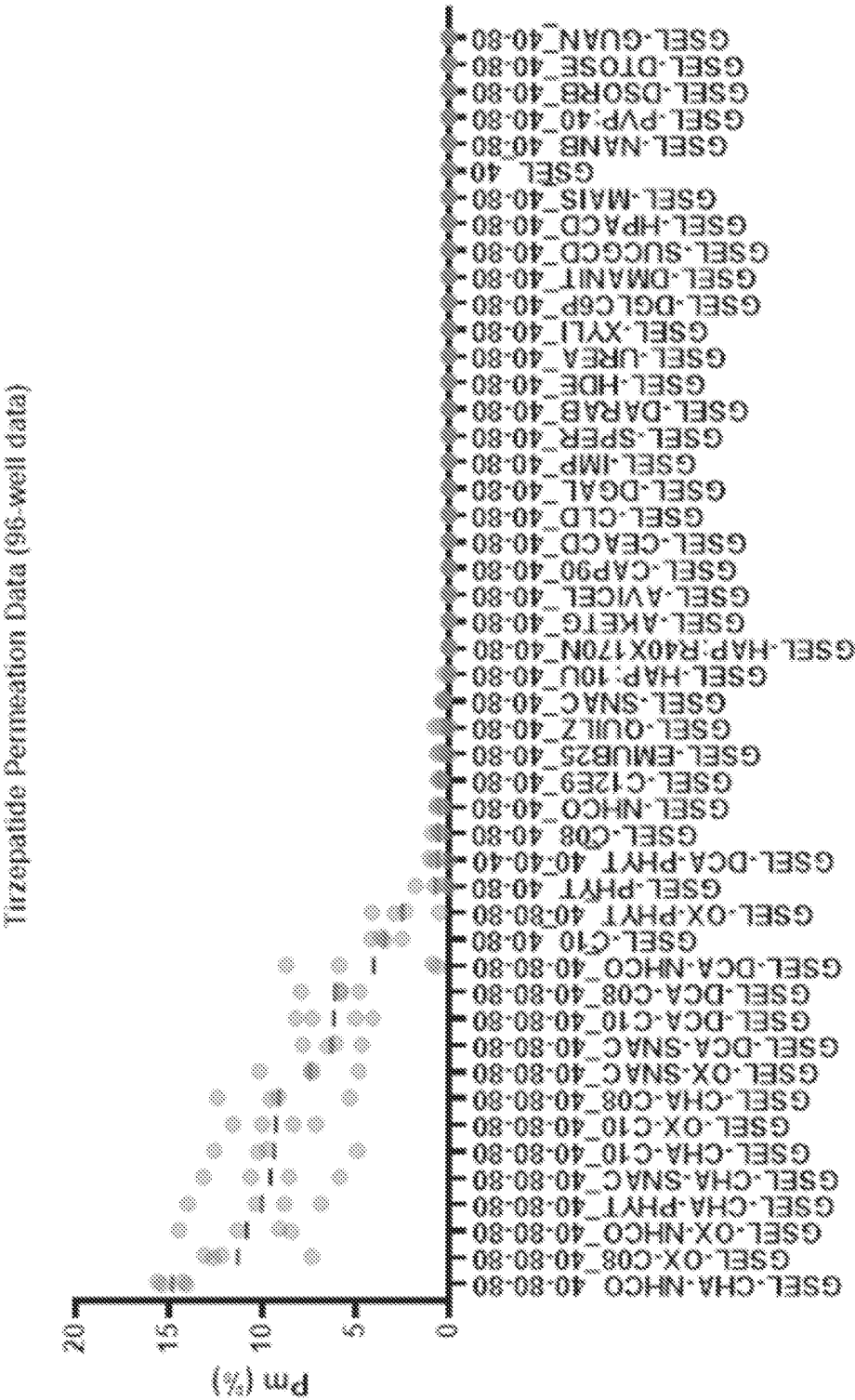
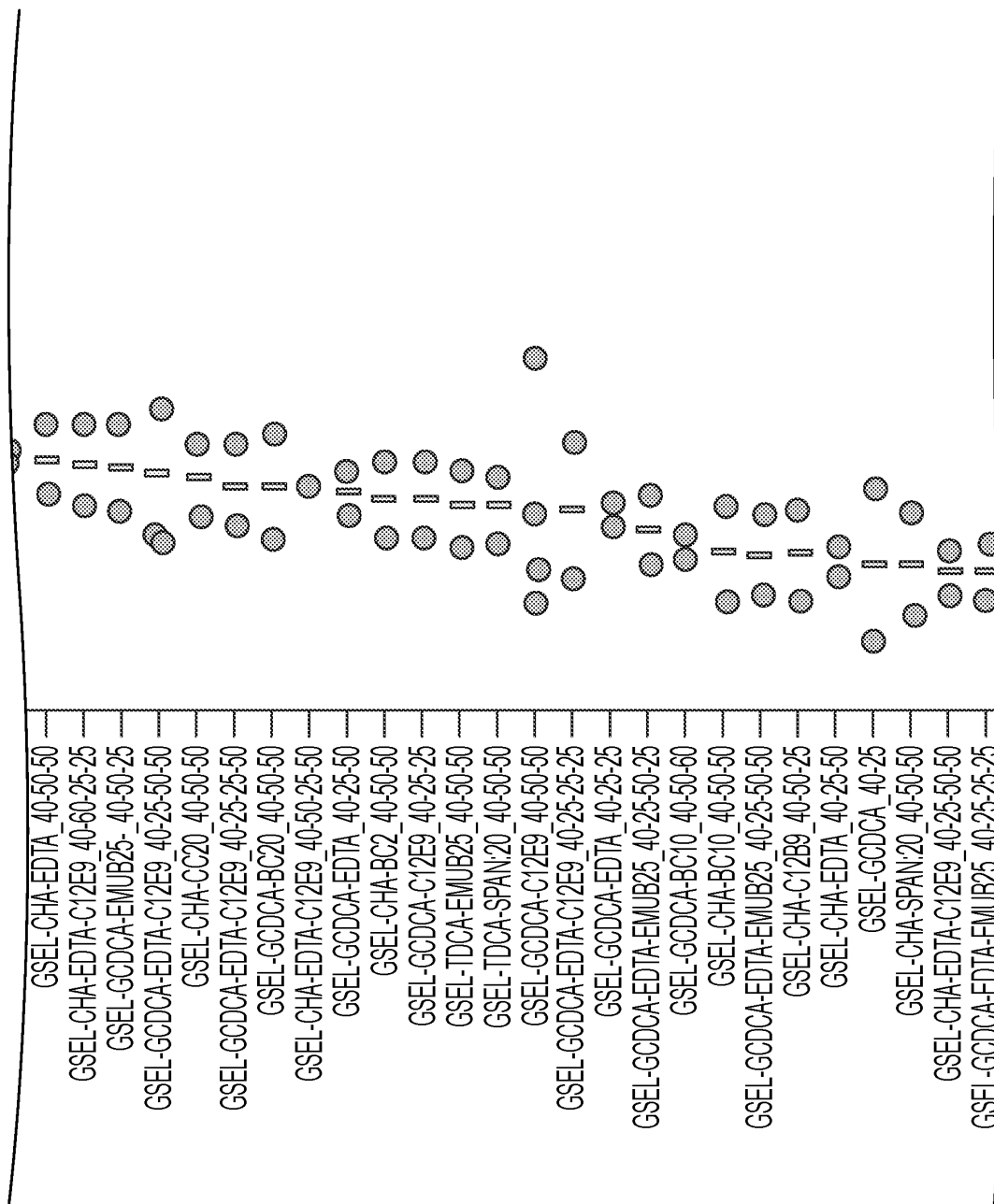


FIG. 5B



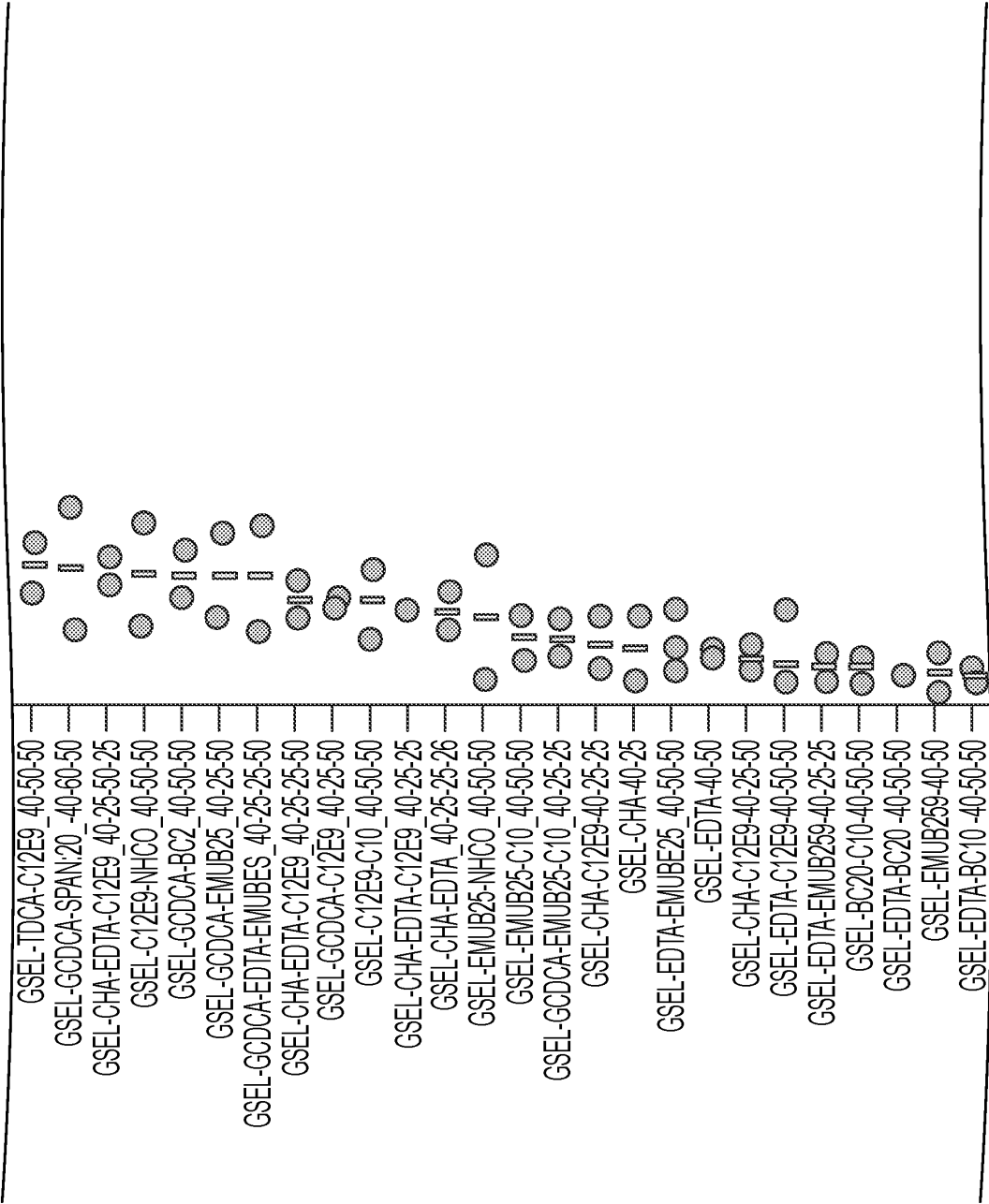


FIG. 5C
CONTINUED

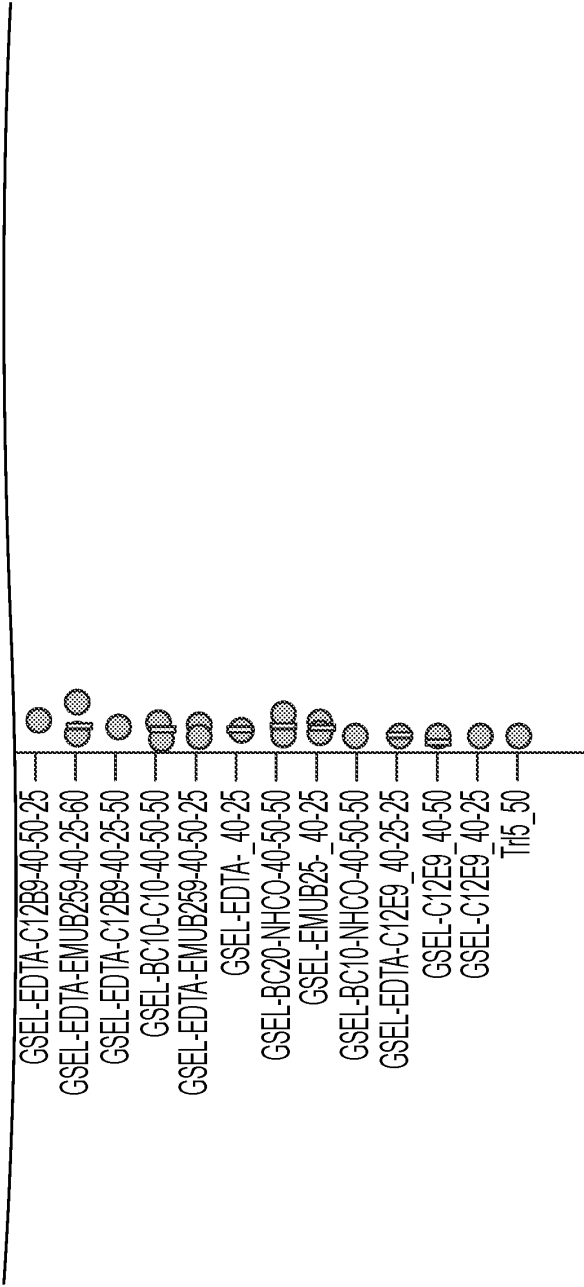


FIG. 5C
CONTINUED

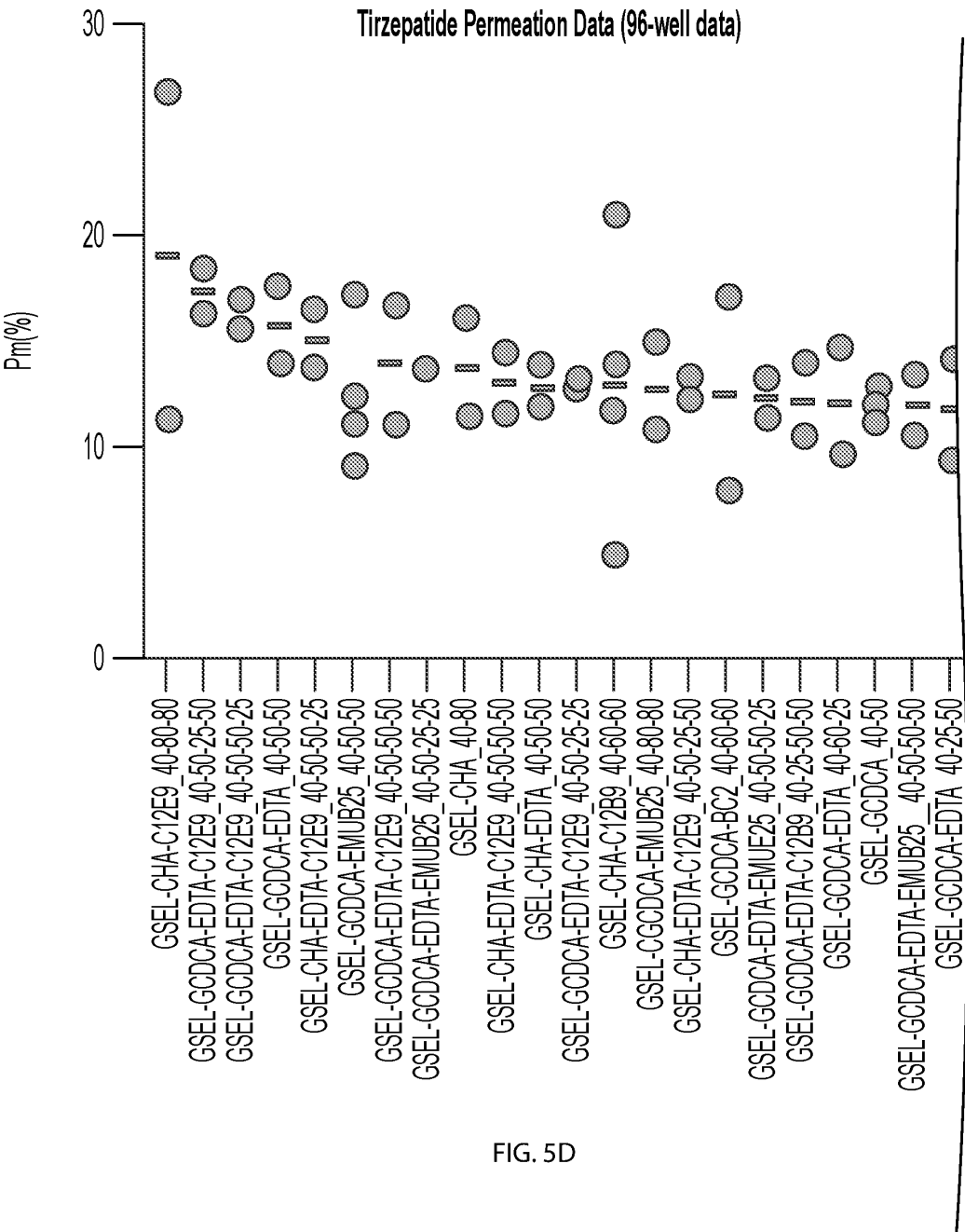
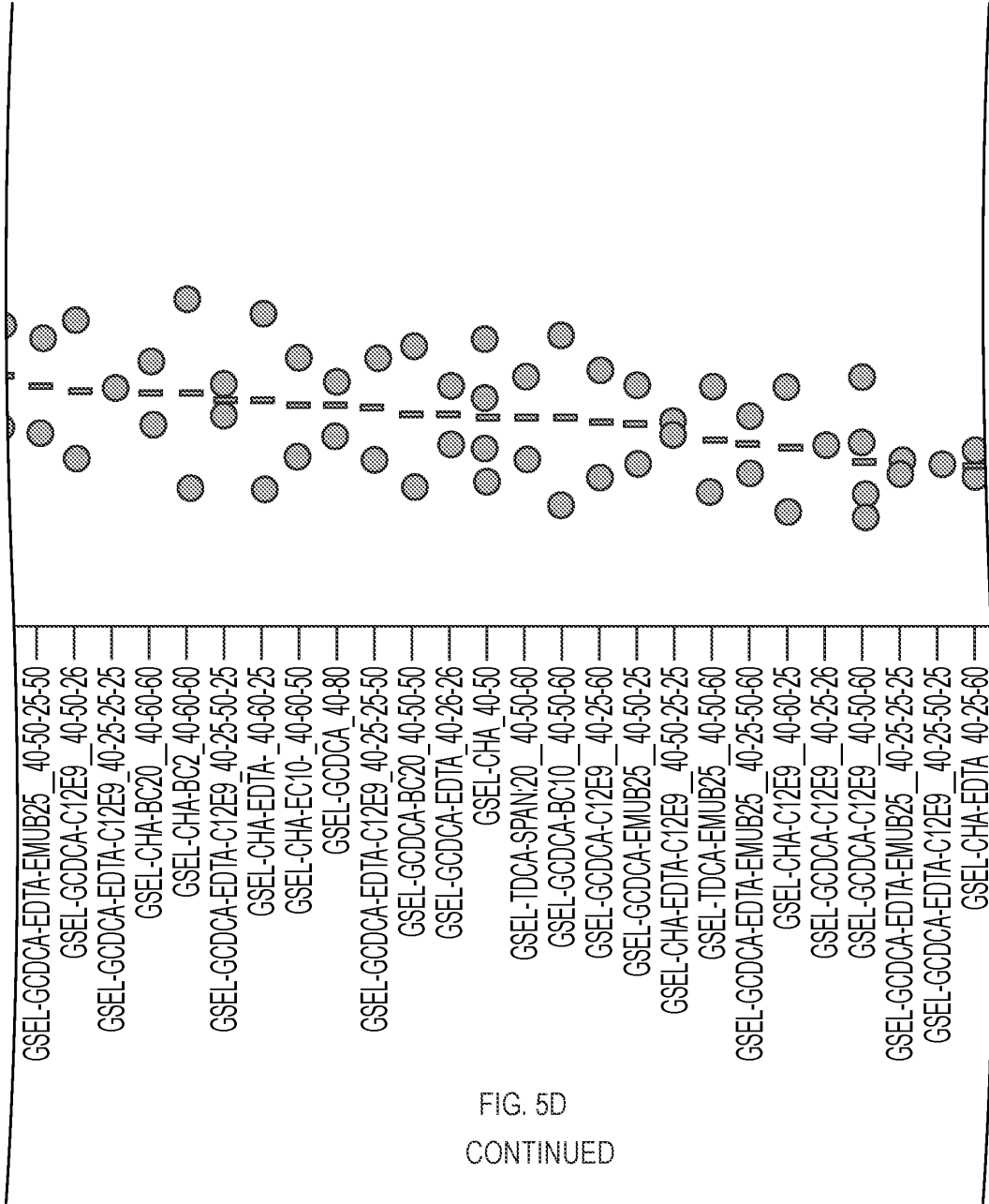
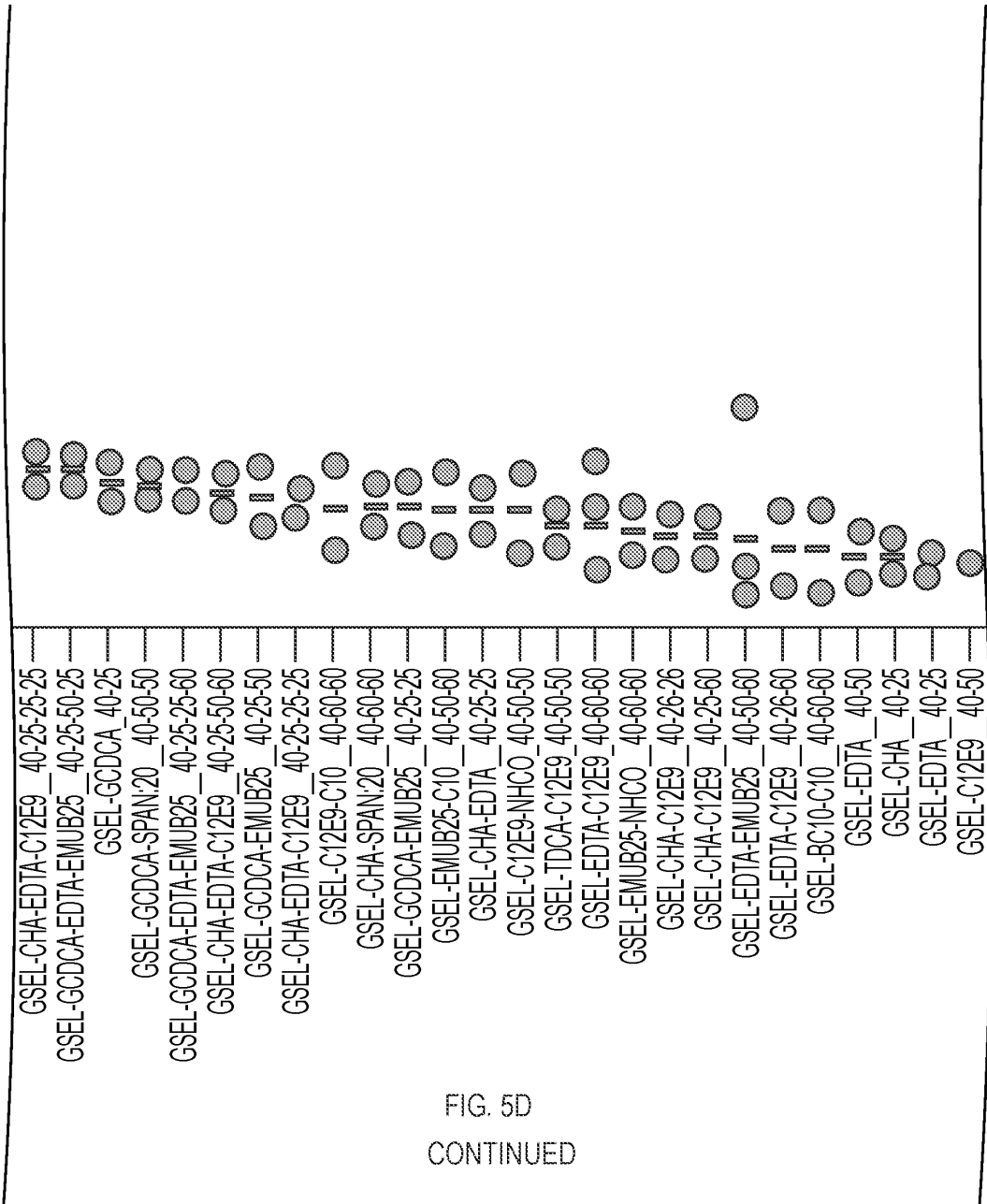
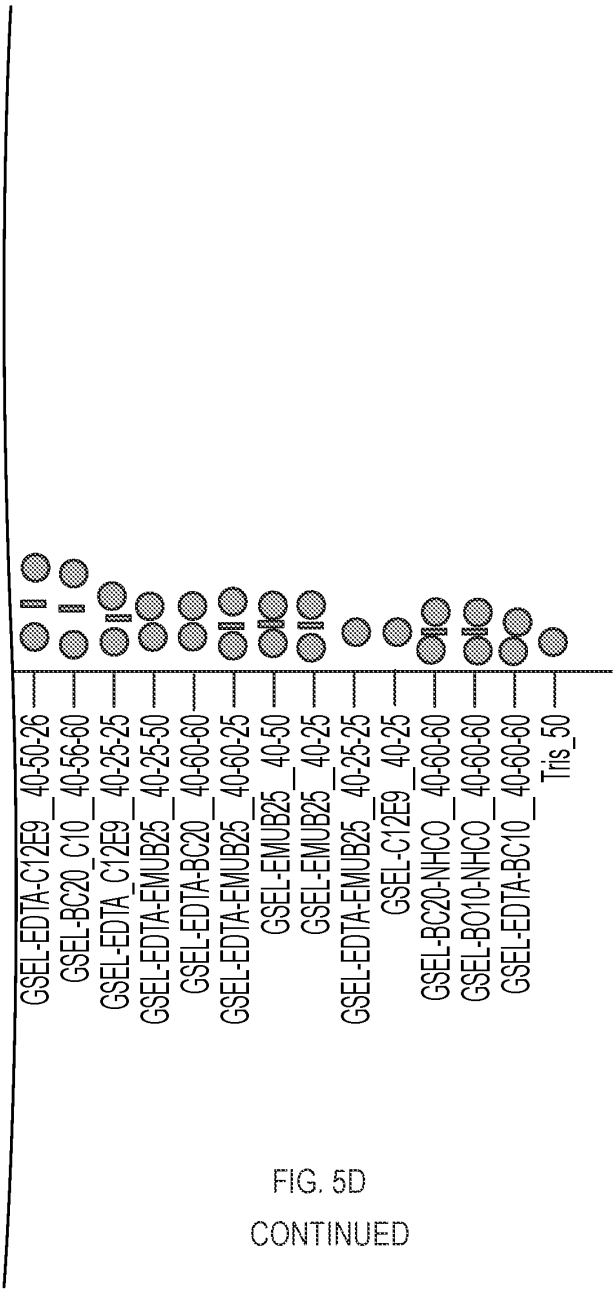


FIG. 5D







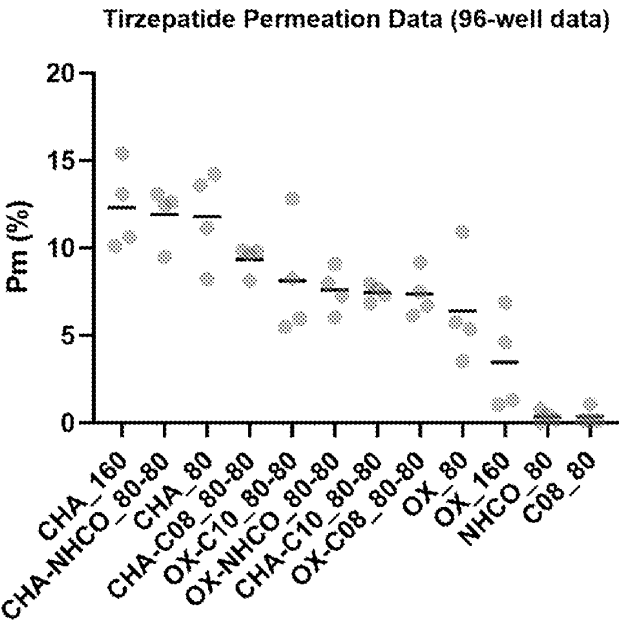


FIG. 5E

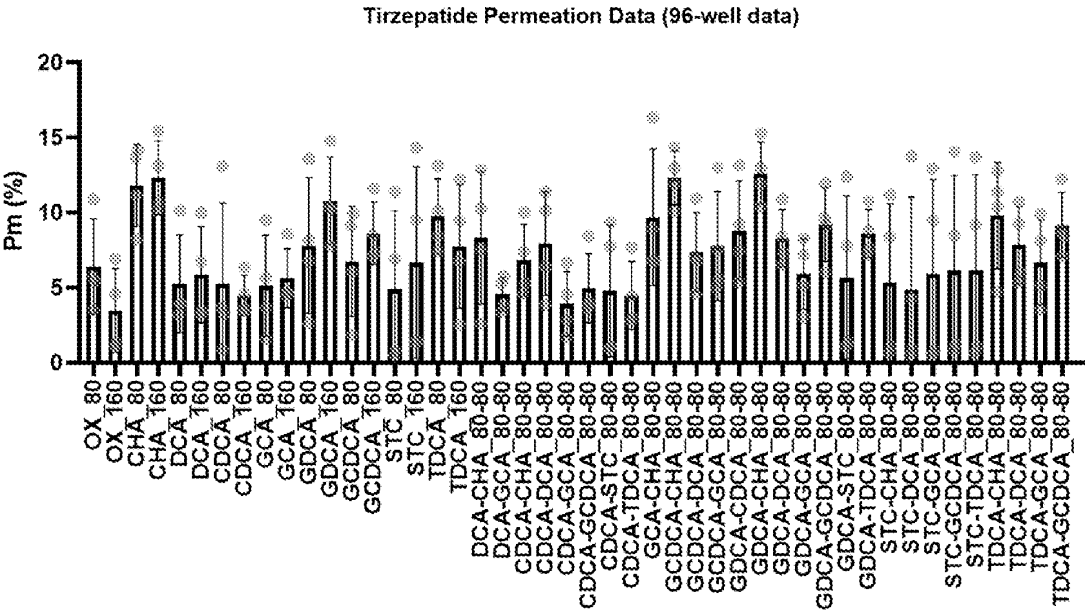


FIG. 5F

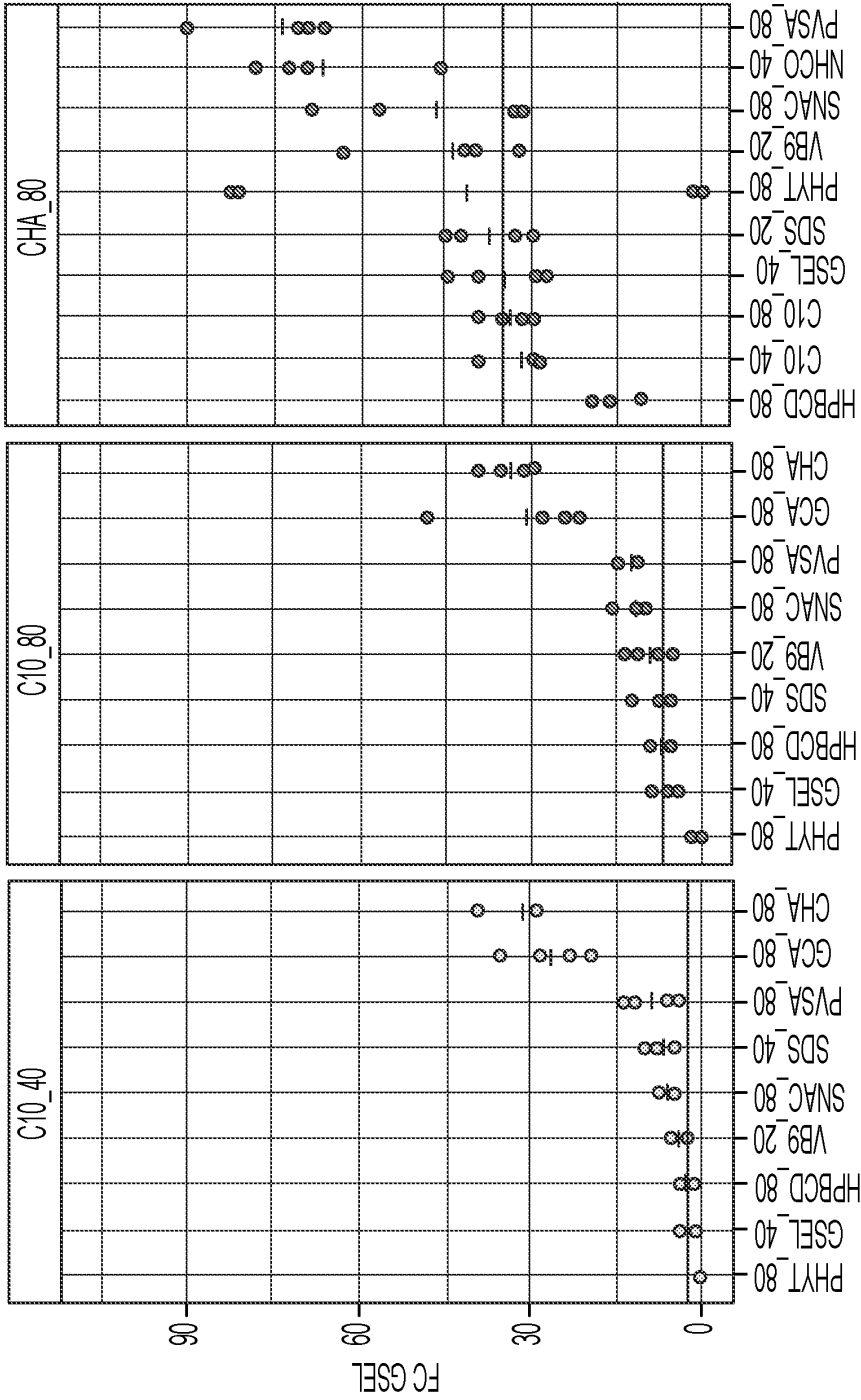


FIG. 6

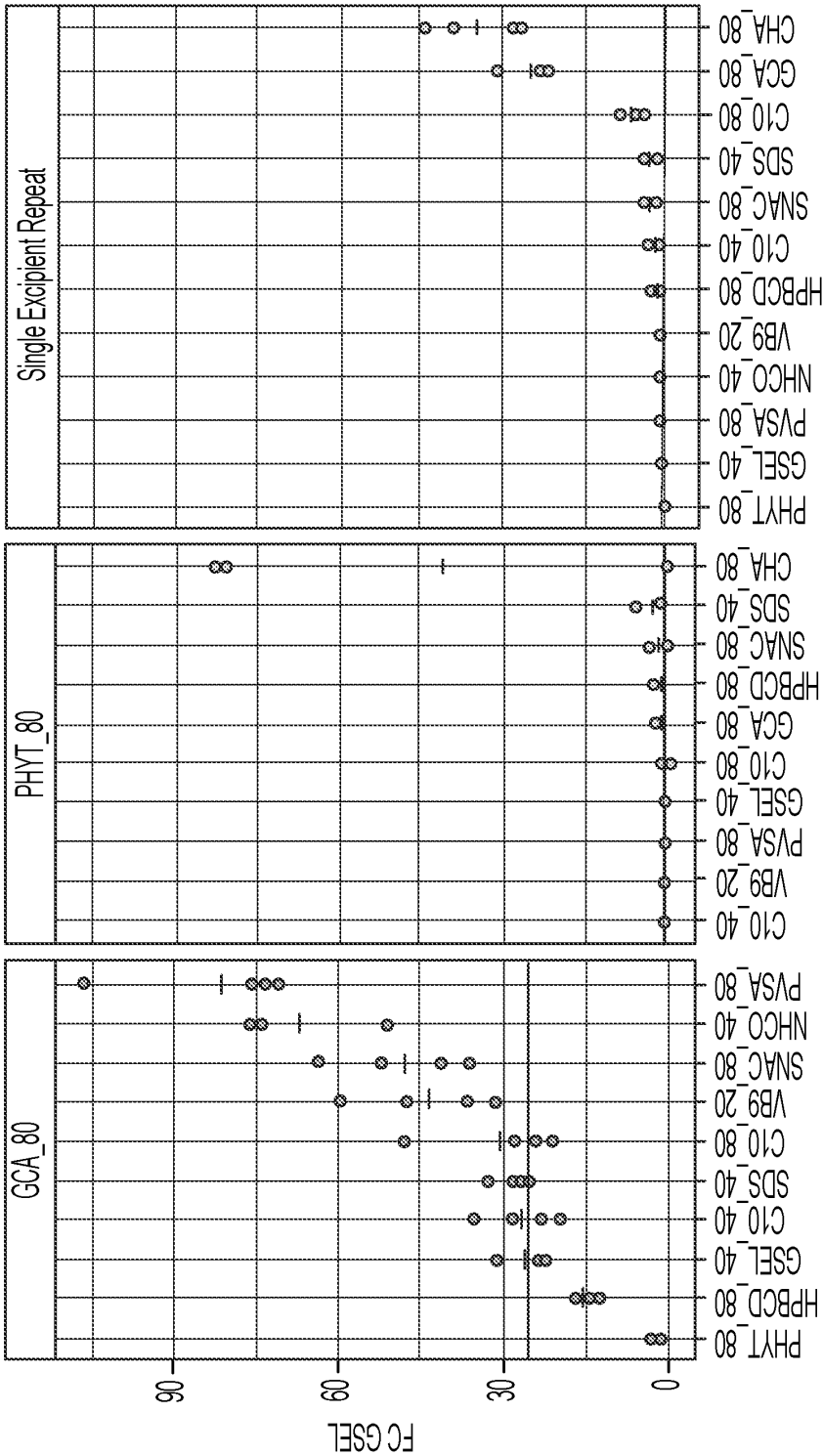


FIG. 6
CONT.

FIG. 7

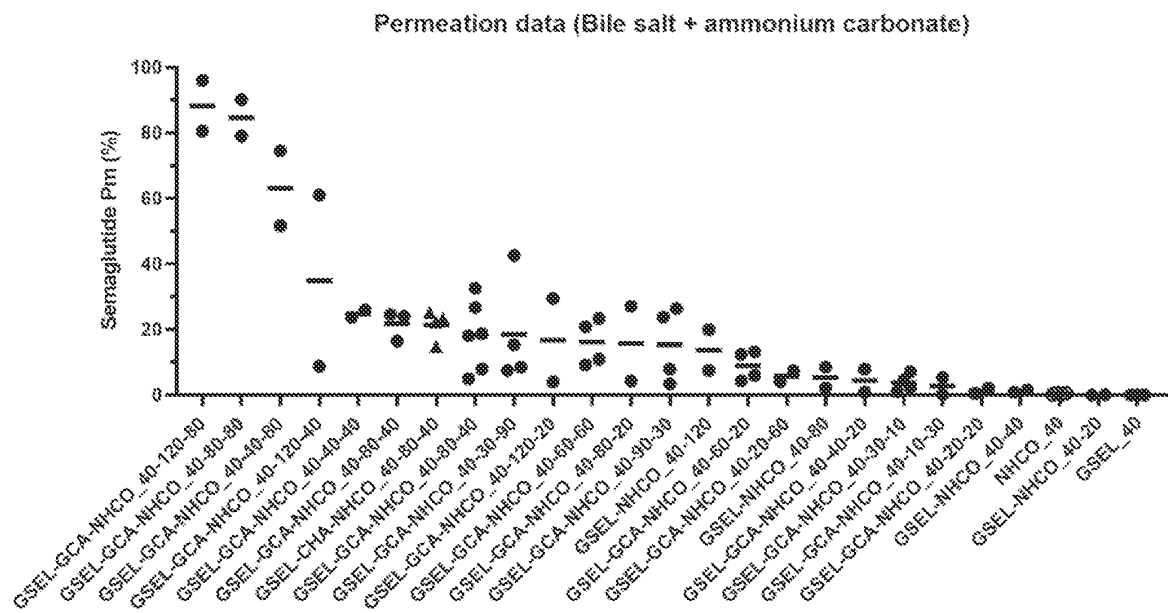


FIG. 8

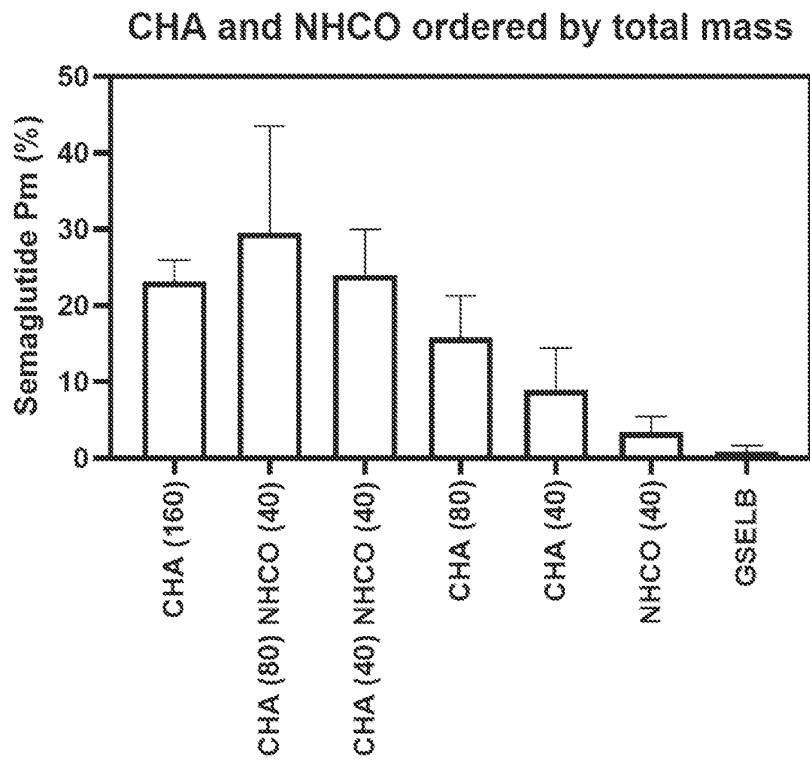


FIG. 9

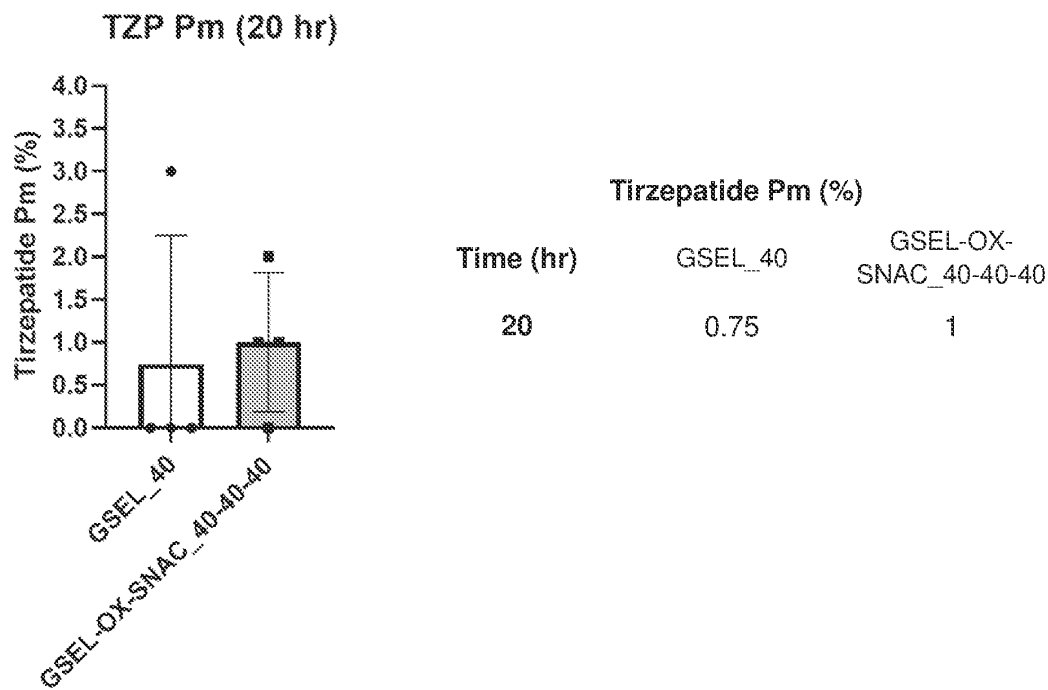
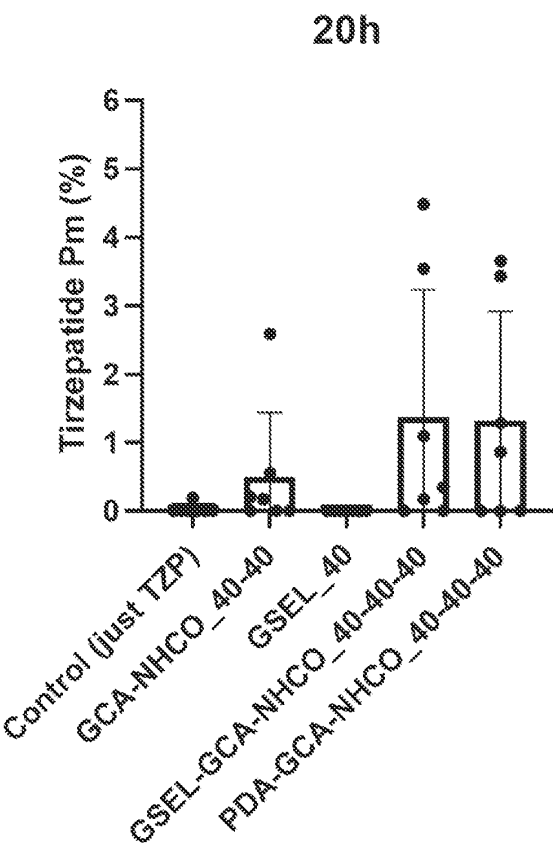


FIG. 10



Tirzepatide Pm (%)					
Time (hr)	Control (just TZP)	GCA-NHCO_40-40	GSEL_40	GSEL-GCA-NHCO_40-40-40	GSEL(PDA)-GCA-NHCO_40-40-40
20	0.03	0.50	0.00	1.37	1.32

FIG. 11A

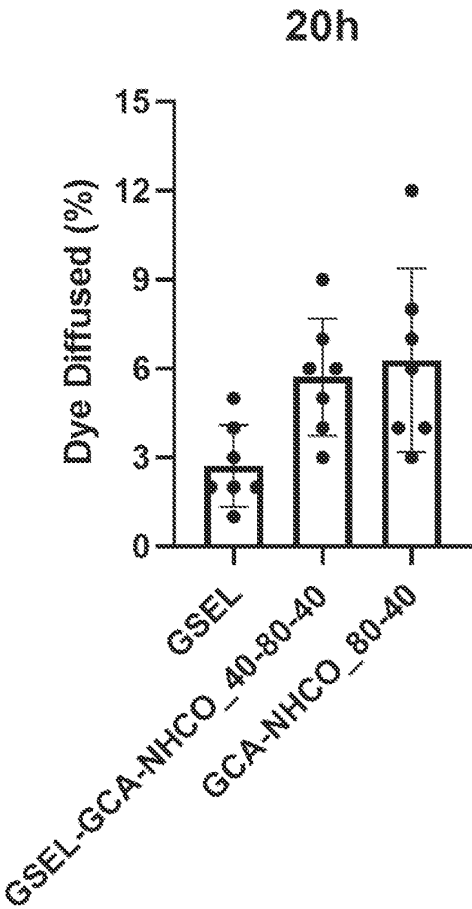


FIG. 11B

Time (hr)	FD40 Pm (%)		
	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

FIG. 12A

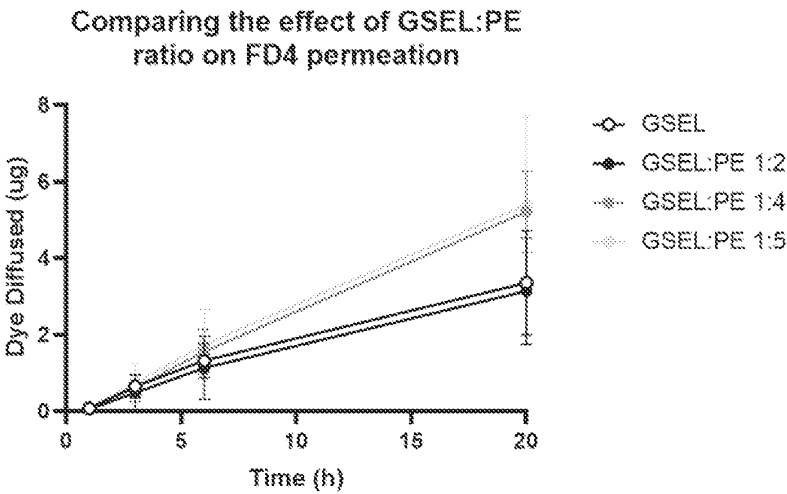


FIG. 12B

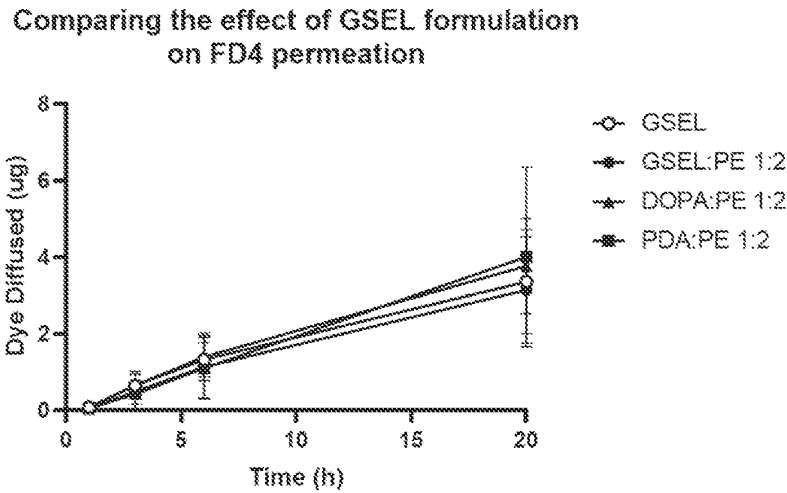


FIG. 12C

FD4 diffused (ug)						
Time (hr)	GSEL:PE 1:2	PDA:PE 1:2	DOPA:PE 1:2	GSEL:PE 1:4	GSEL:PE 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

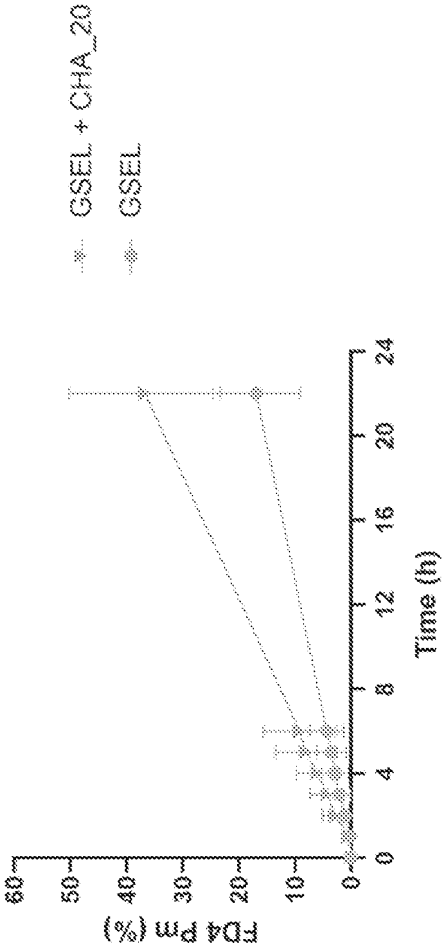
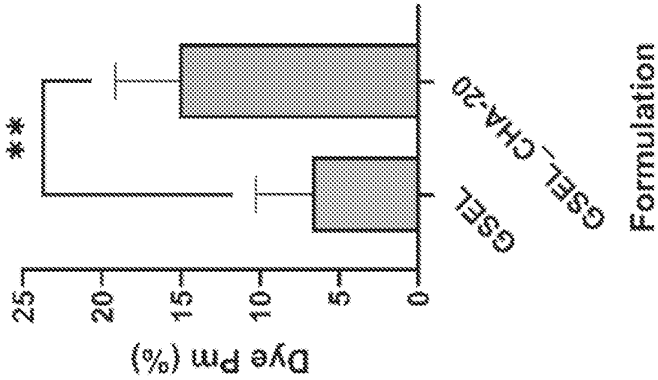
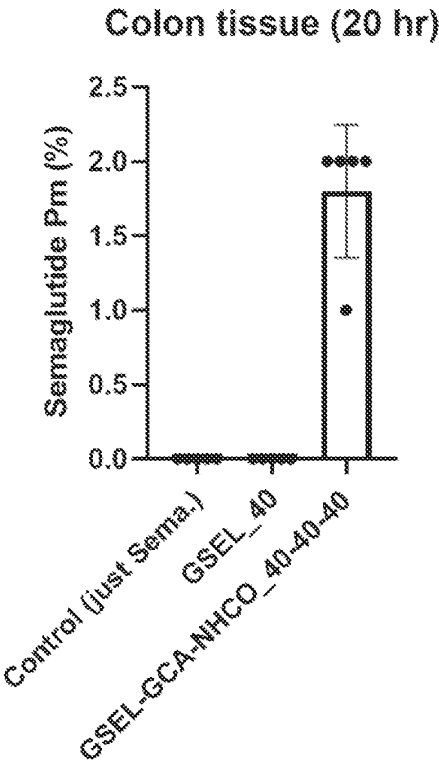


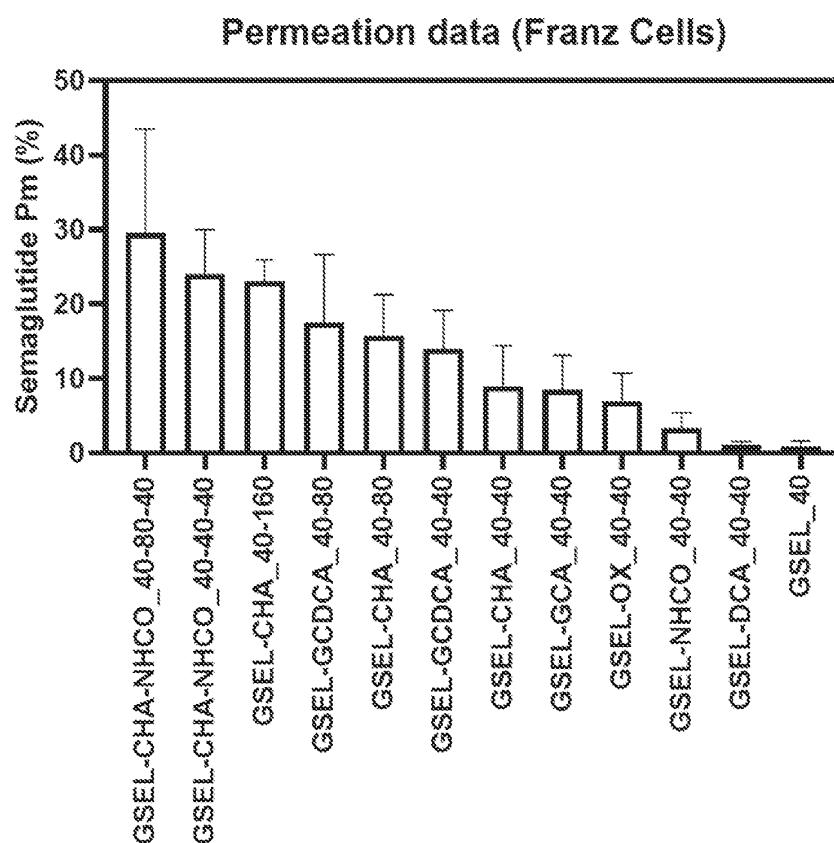
FIG. 12D

FIG. 13



Semaglutide Pm on colon tissue (%)			
Time (hr)	Control (semaglutide only)	GSEL_40	GSEL-GCA- NHCO_40-40-40
20	0	0	1.8

FIG. 14



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. 15A

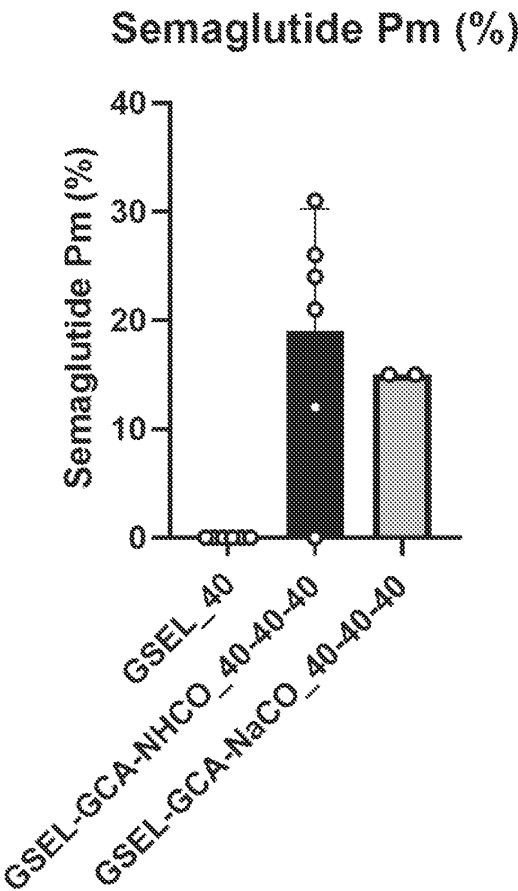


FIG. 15B

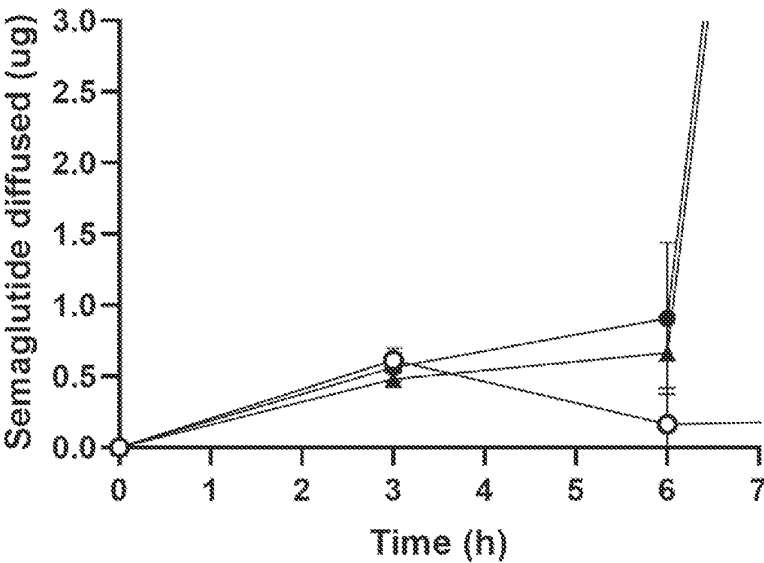


FIG. 15C

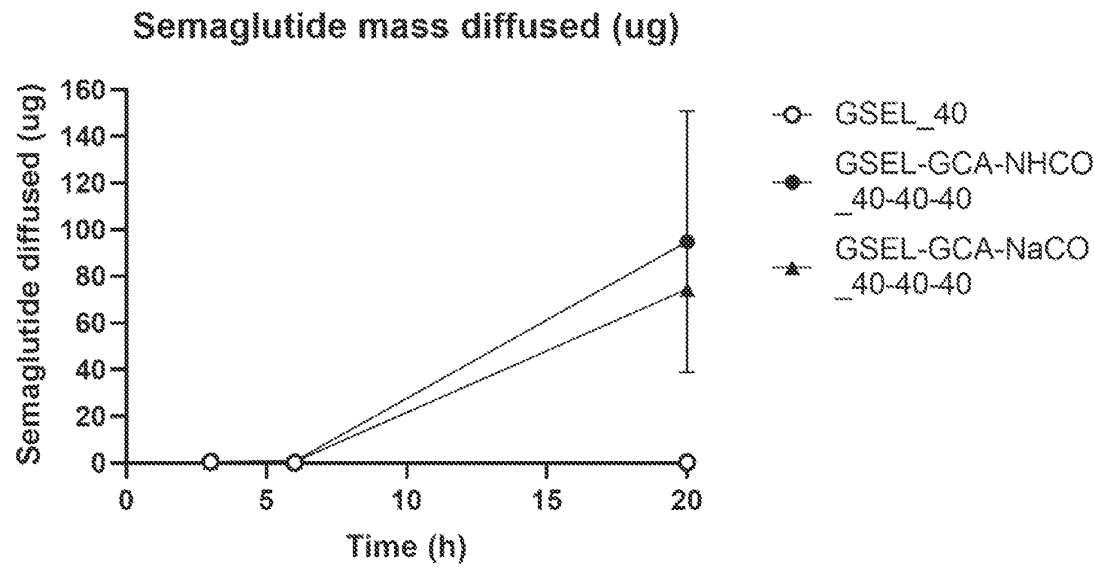


FIG. 15D

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

FIG. 16A

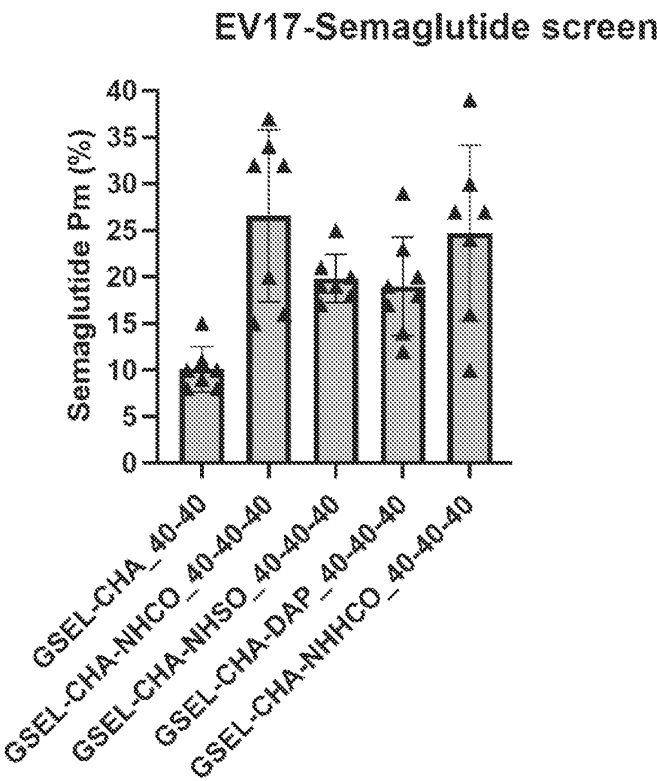


FIG. 16B

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. 17A

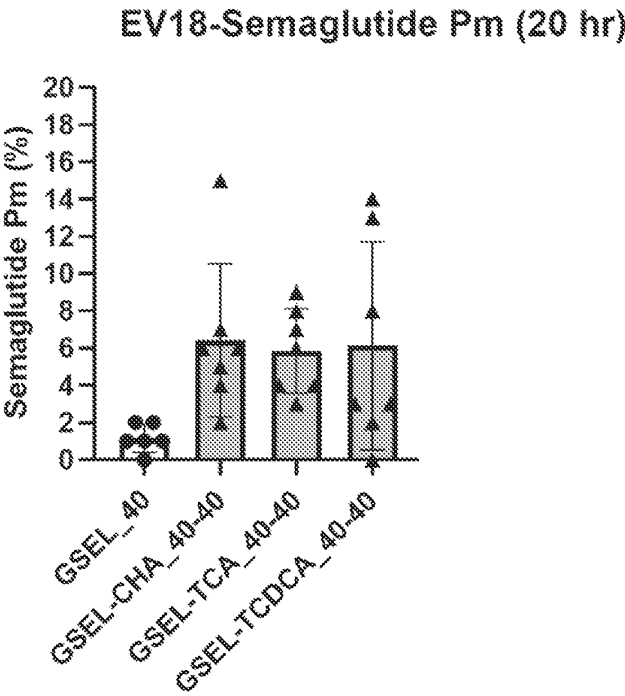


FIG. 17B

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. 18A

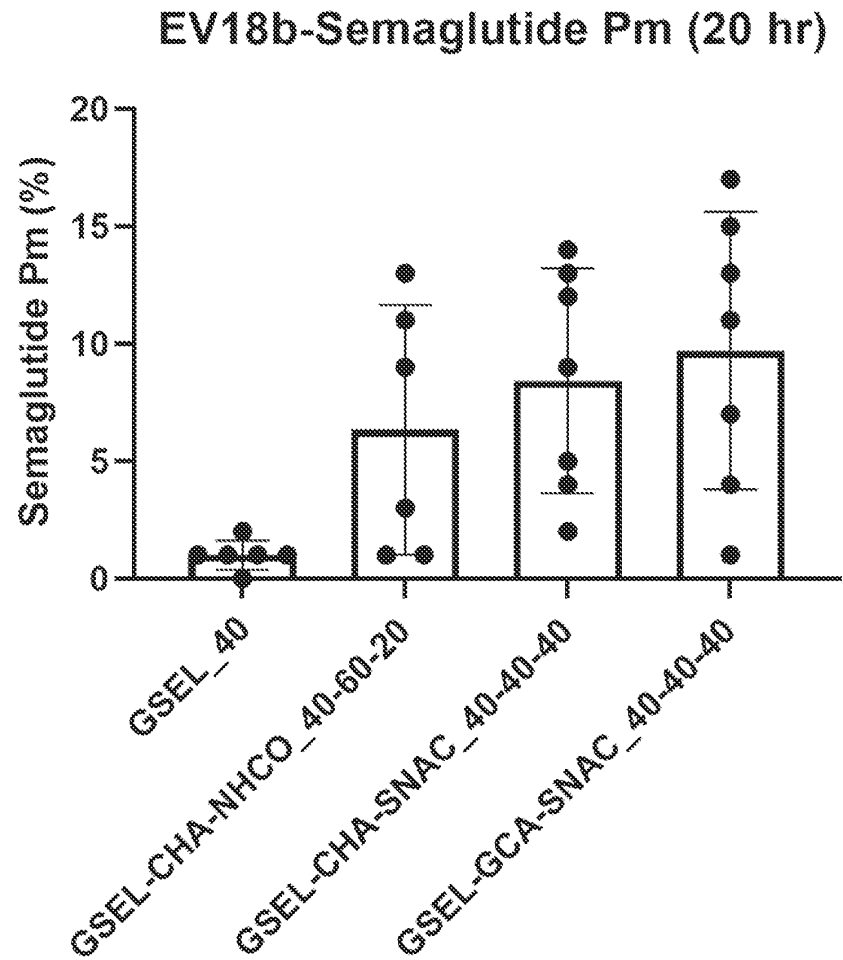


FIG. 18B

Time (hr)	Semaglutide Pm			
	GSEL_40	GSEL-CHA-NHCO_40-60-20	GSEL-CHA-SNAC_40-40-40	GSEL-GCA-SNAC_40-40-40
20	1.00	6.33	8.43	9.71

FIG. 19A

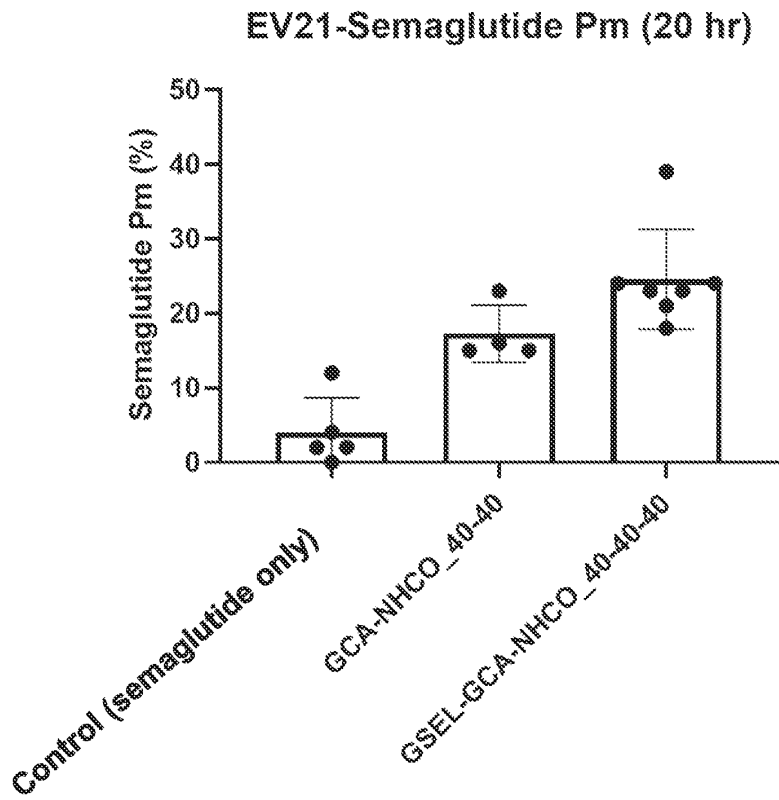
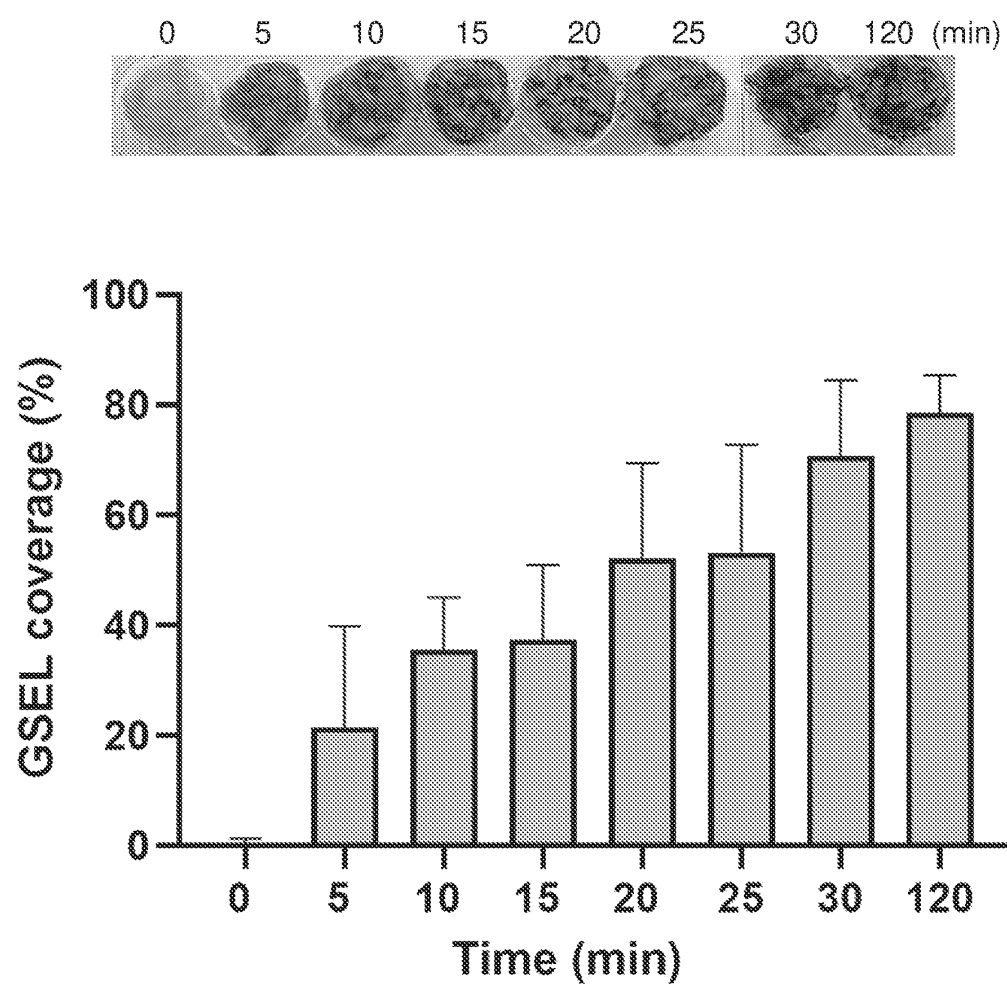


FIG. 19B

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

FIG. 20A



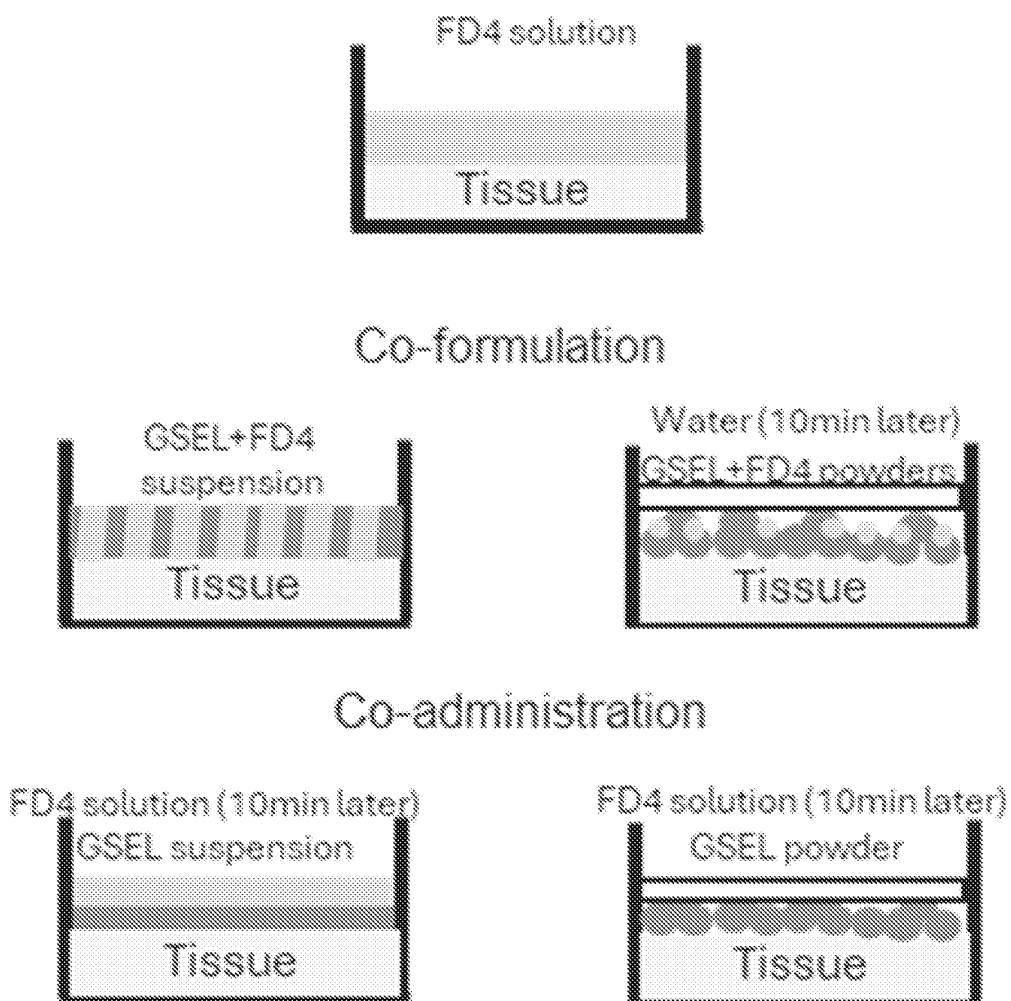


FIG. 20B

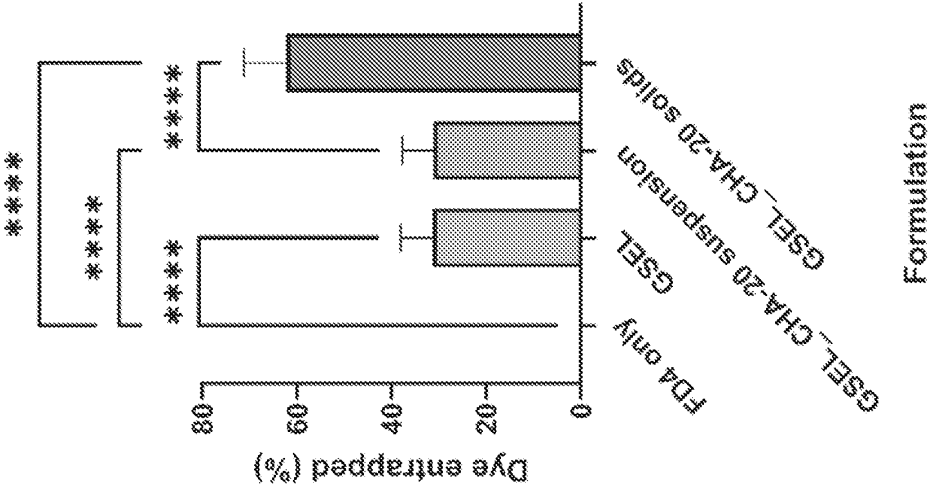


FIG. 20C

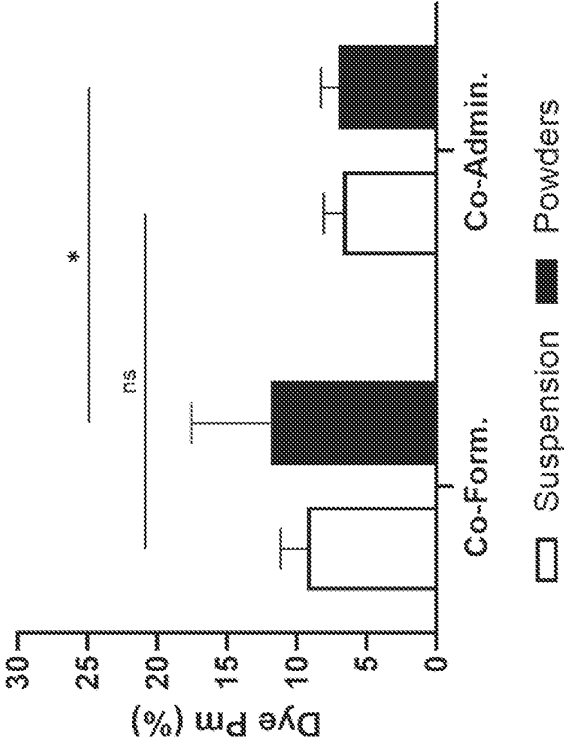
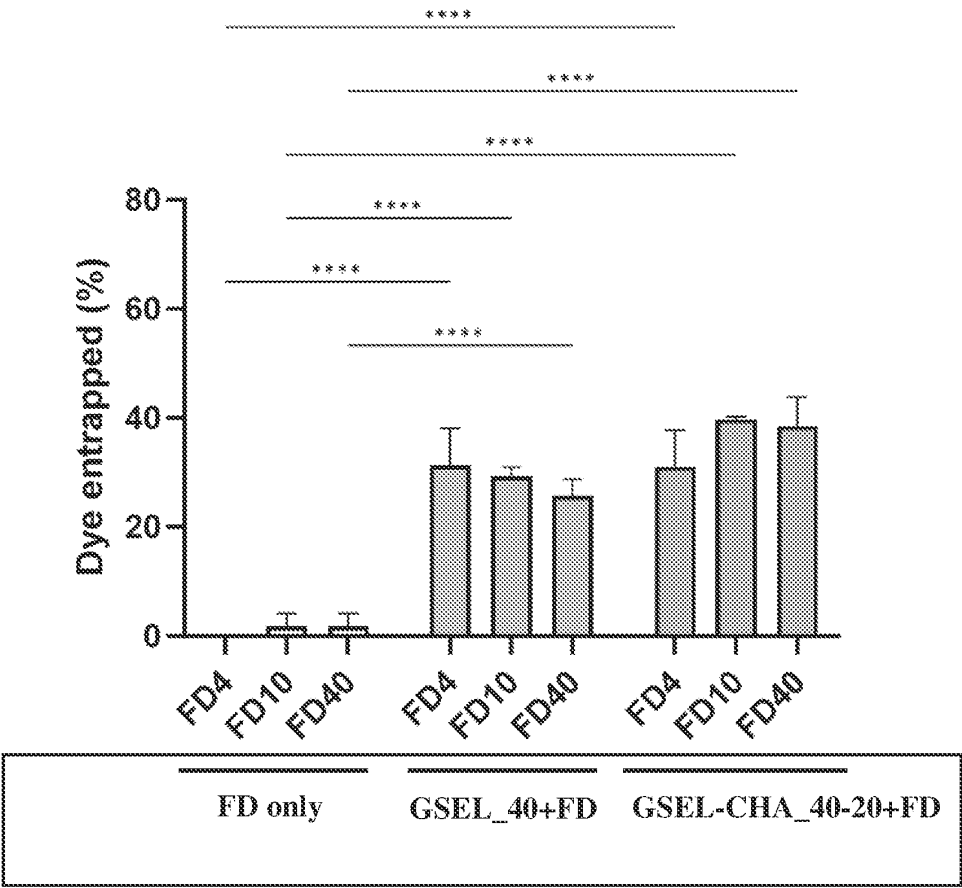


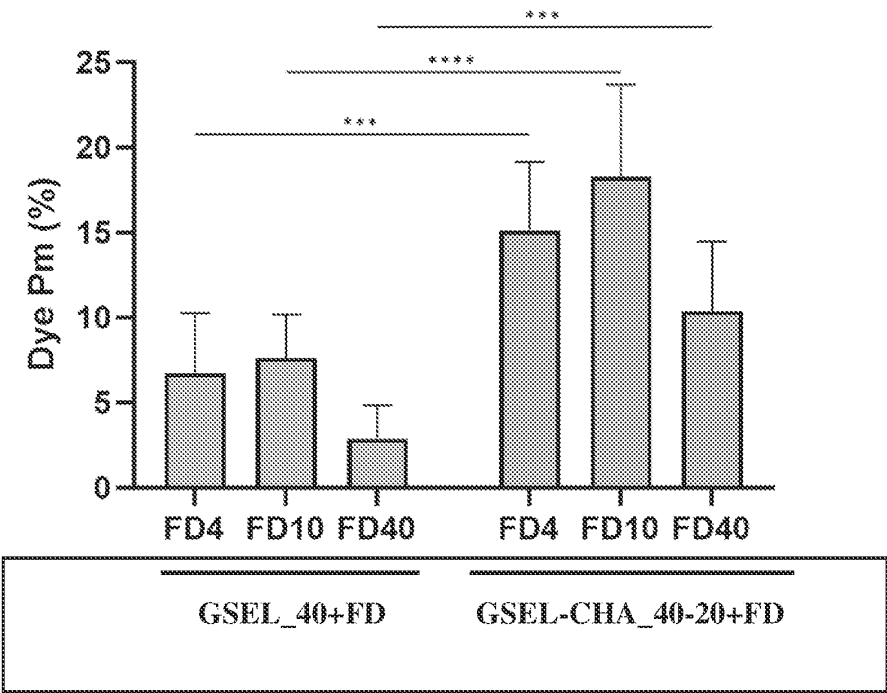
FIG. 20D

FIG. 20E



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. 20F



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

FIG. 20G

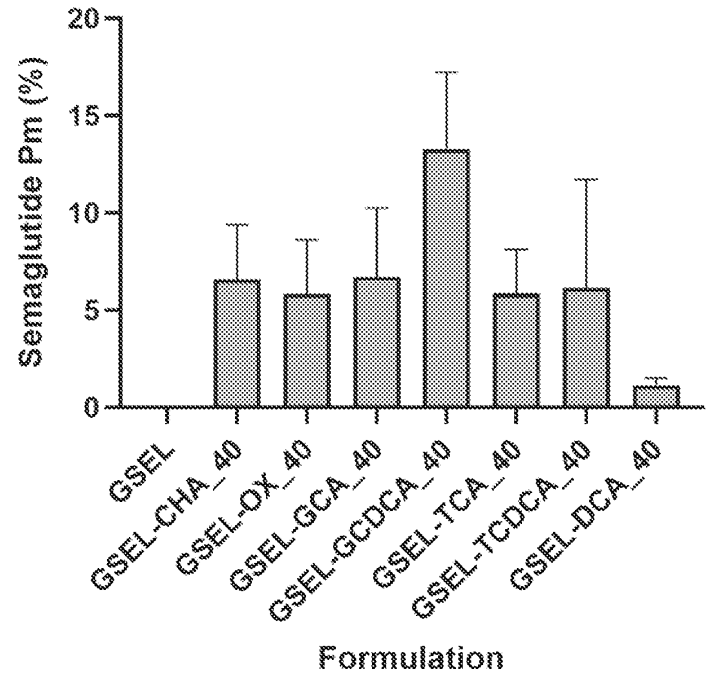


FIG. 20H

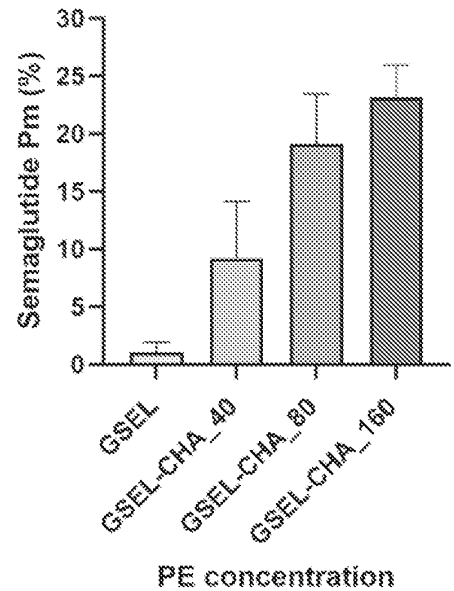


FIG. 21

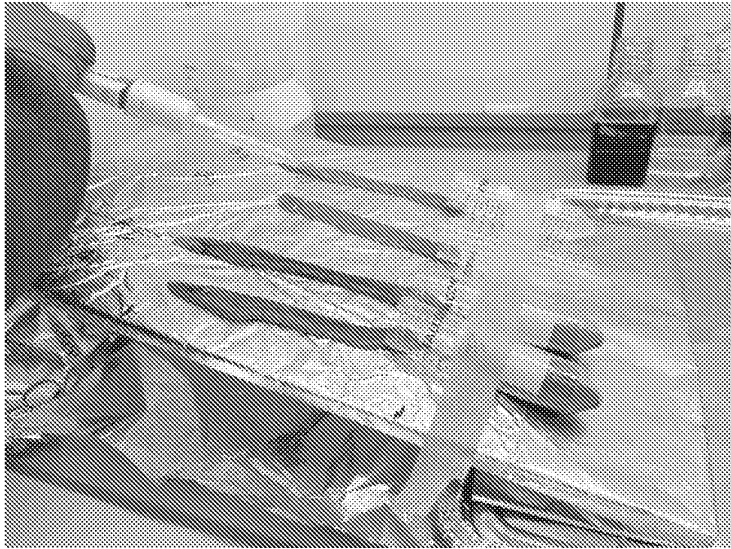


FIG. 22A

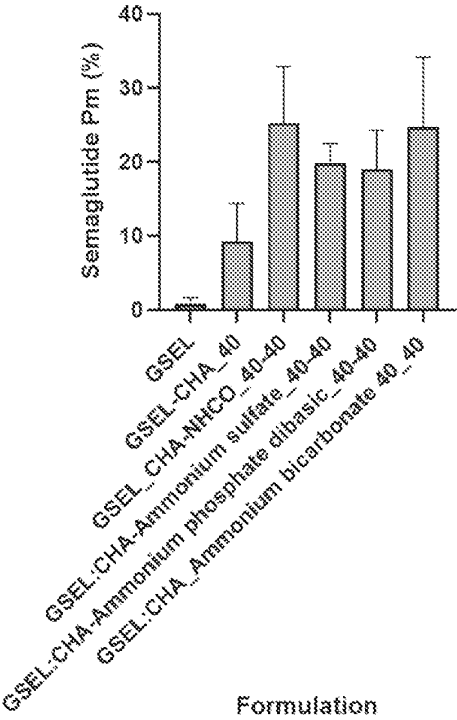


FIG. 22B

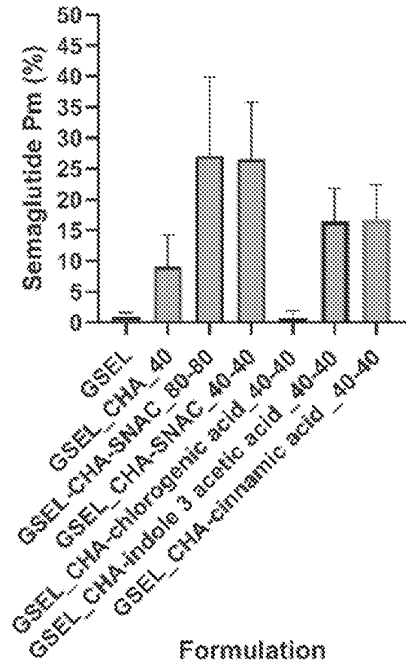


FIG. 22C

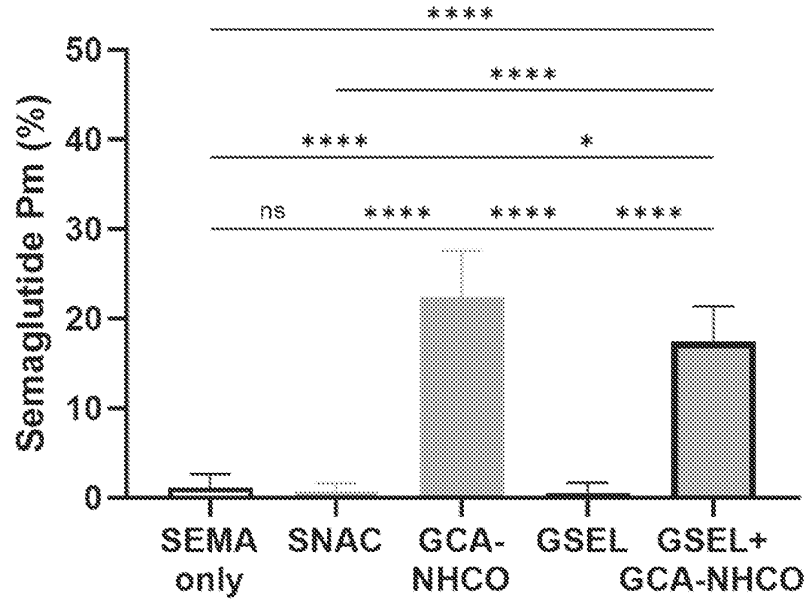


FIG. 22D

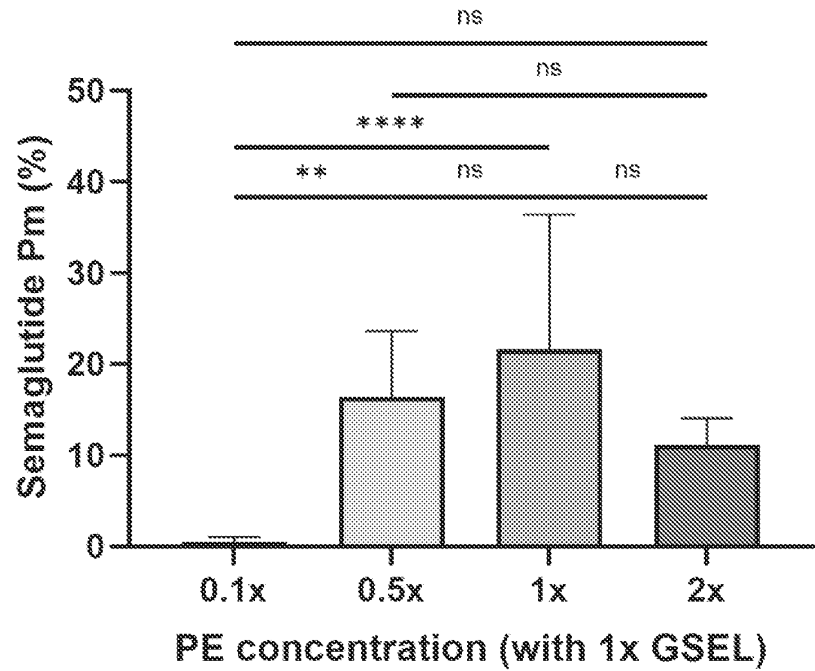


FIG. 22E

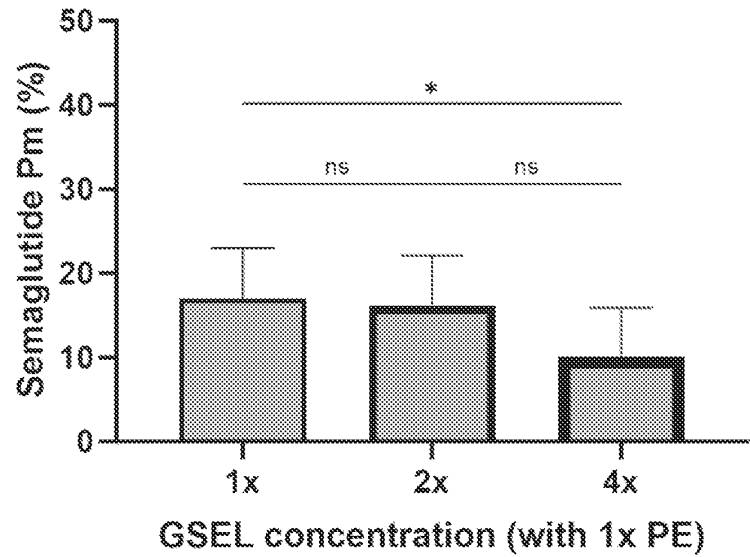


FIG. 22F

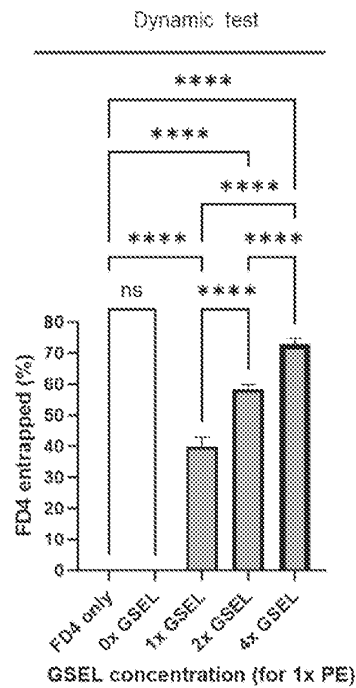


FIG. 22G

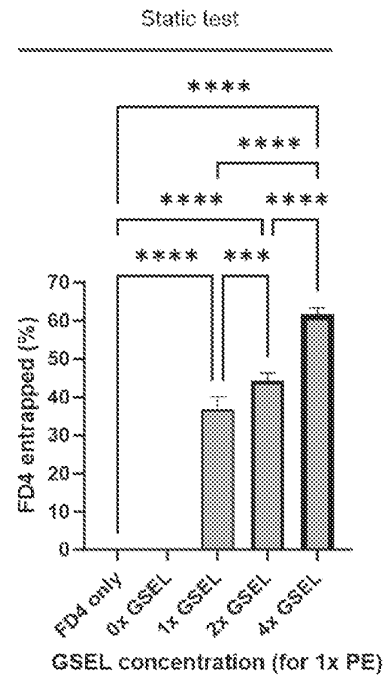


FIG. 22H

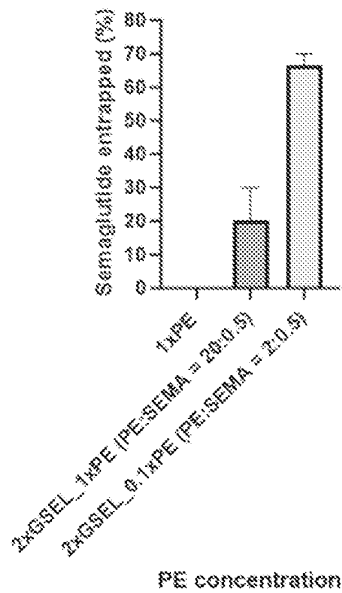


FIG. 22I

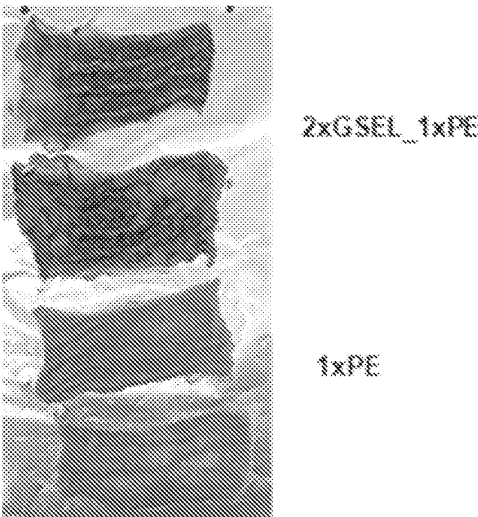


FIG. 22J

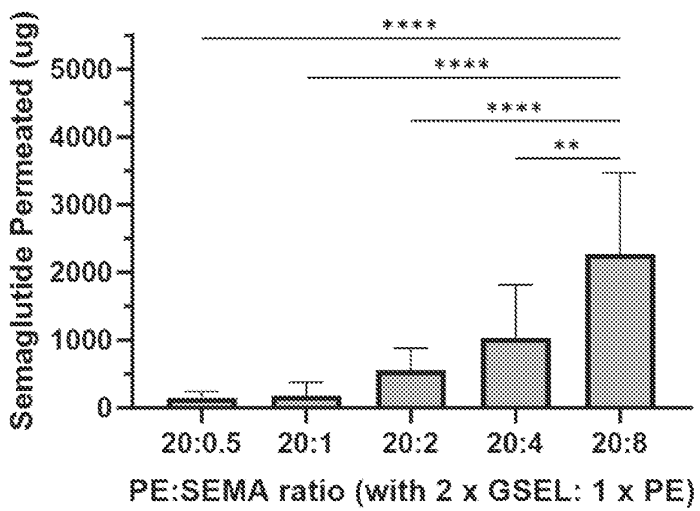


FIG. 22K

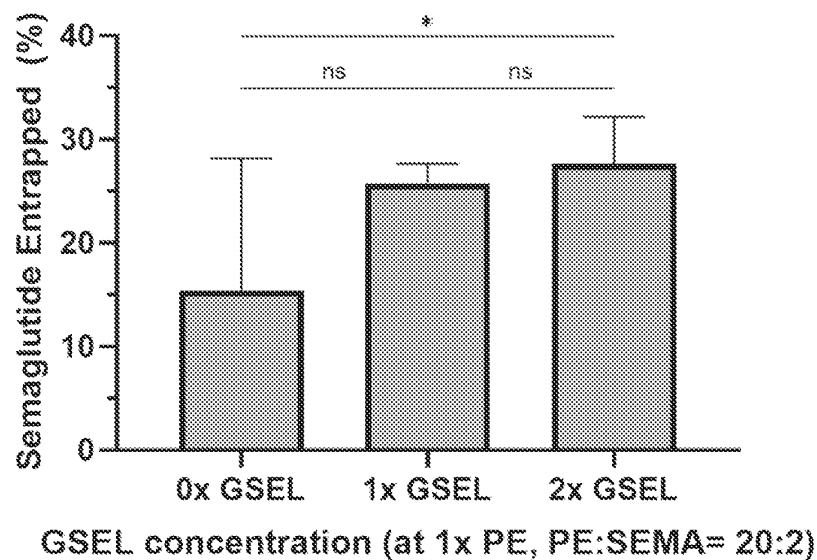


FIG. 22L

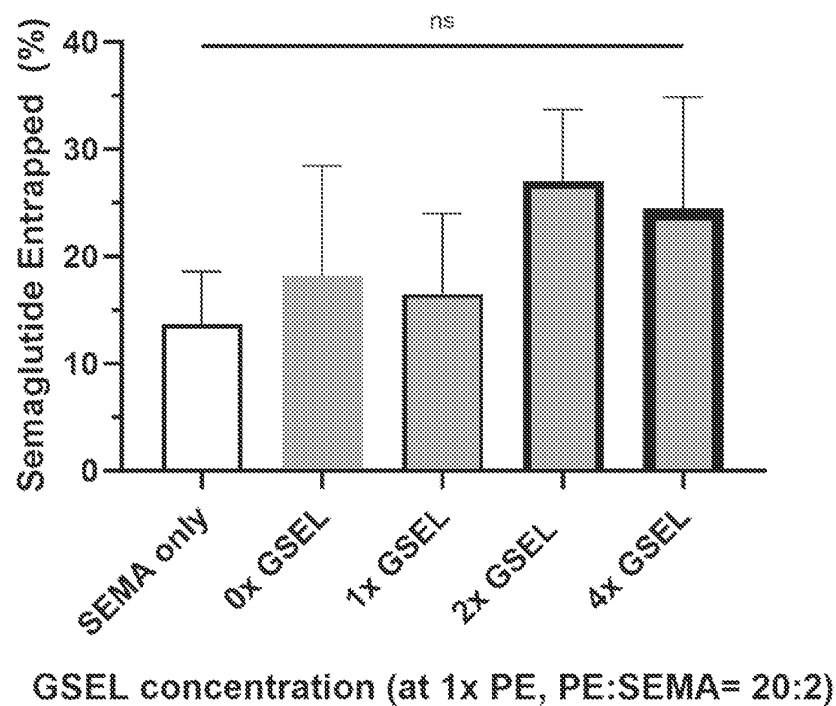
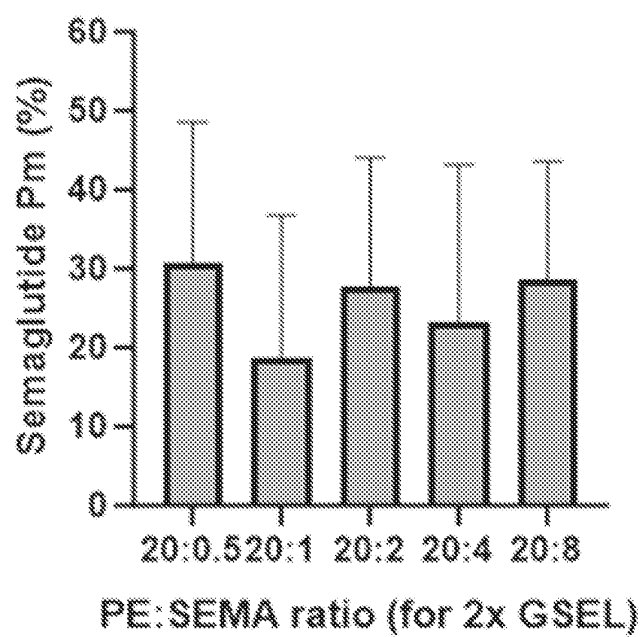


FIG. 22M



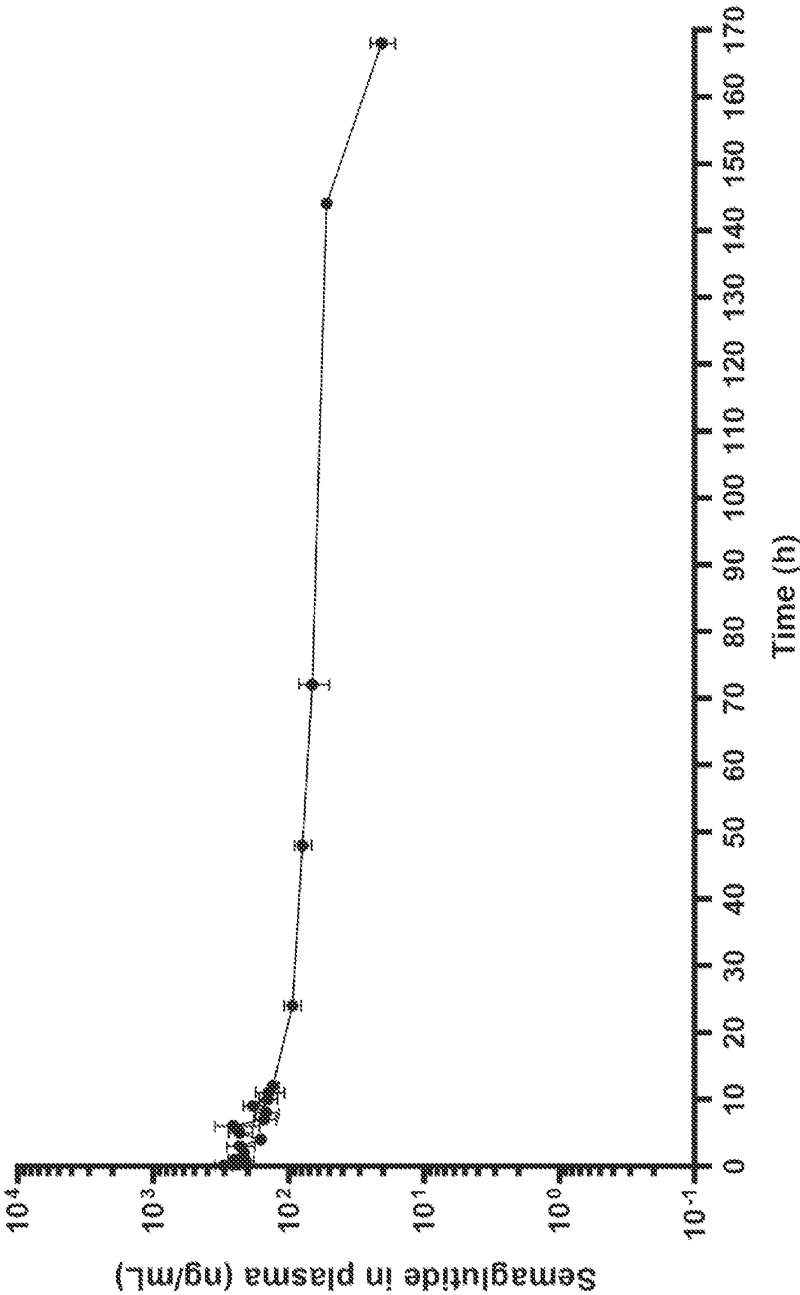


FIG. 23A

FIG. 23B

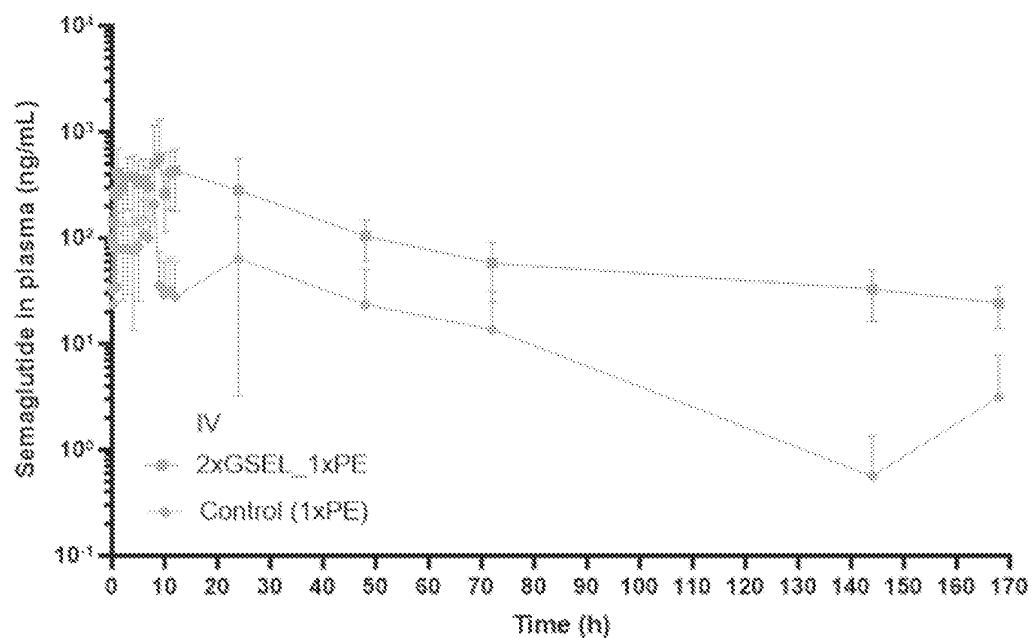


FIG. 23C

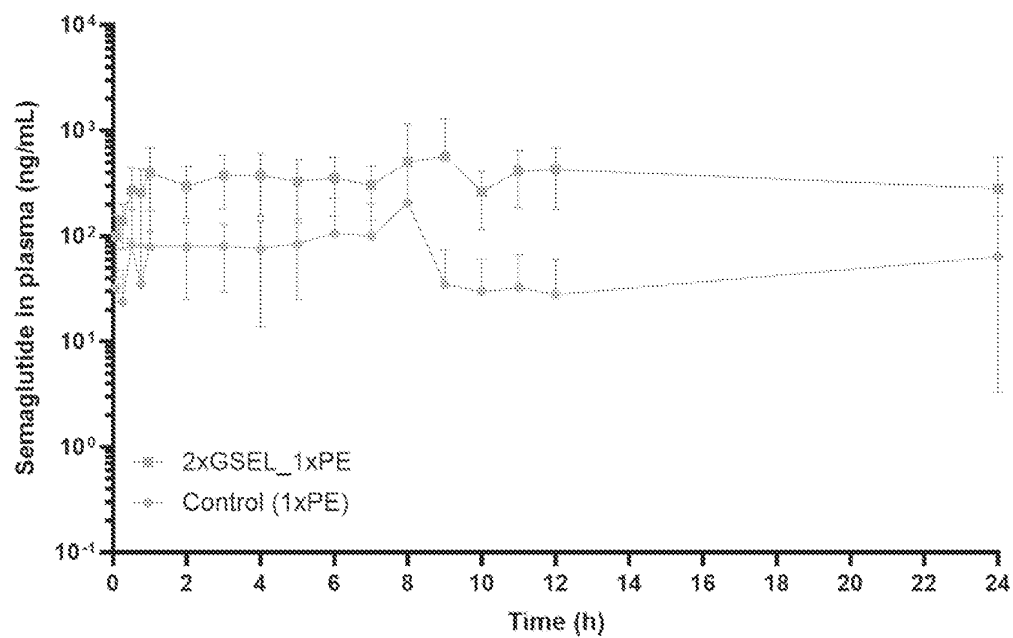


FIG. 23D

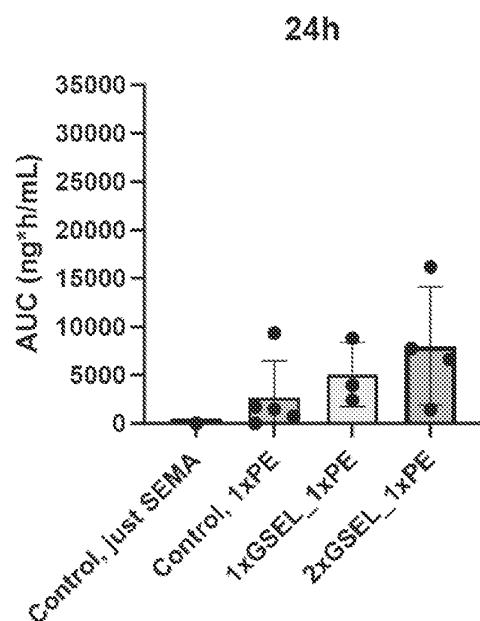


FIG. 23E

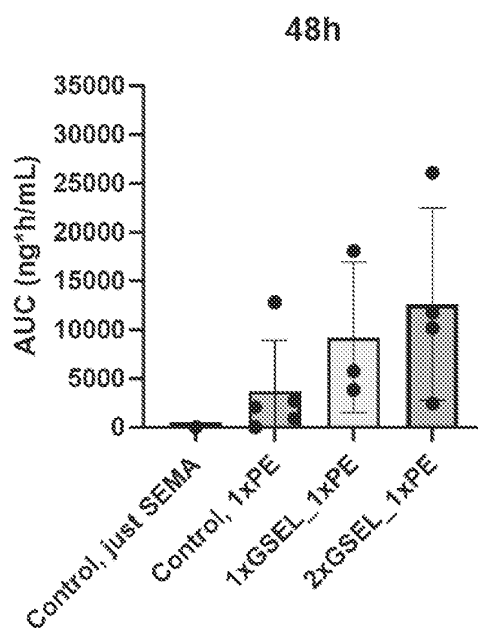


FIG. 23F

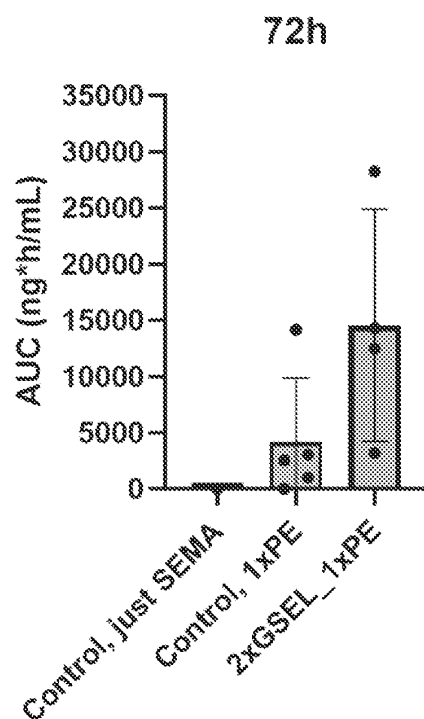


FIG. 23G

