

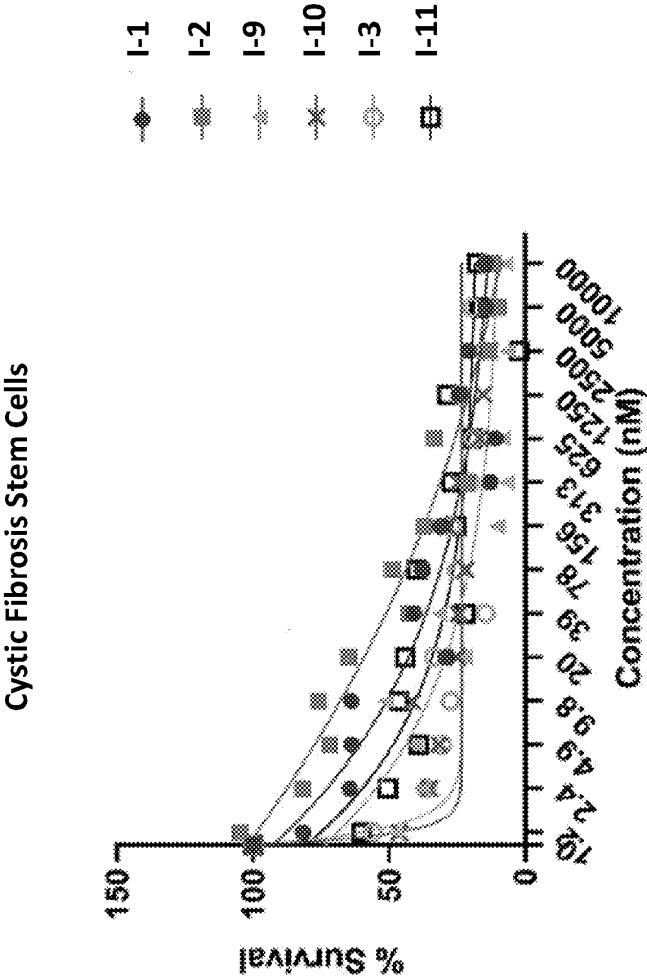


Figure 1

Asthma Stem Cells

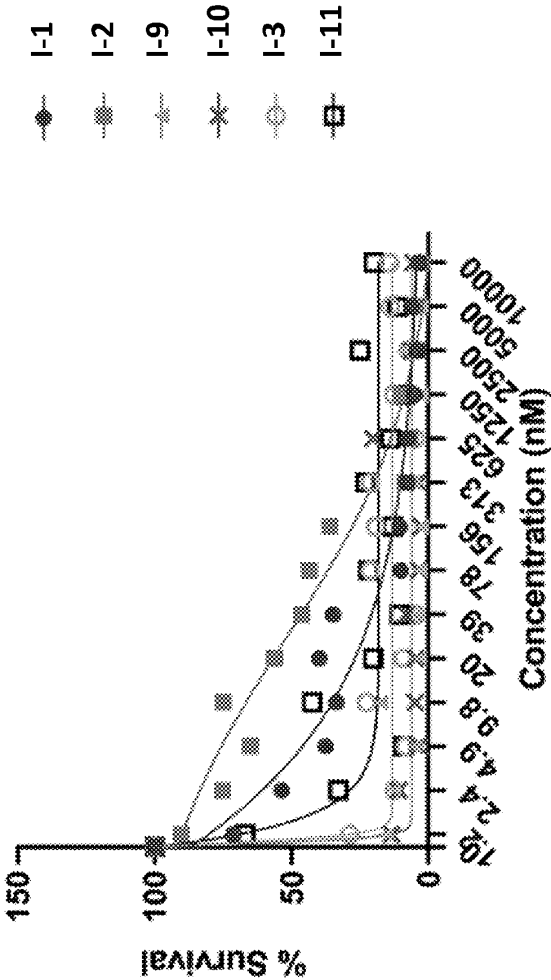


Figure 2

COPD Stem Cells

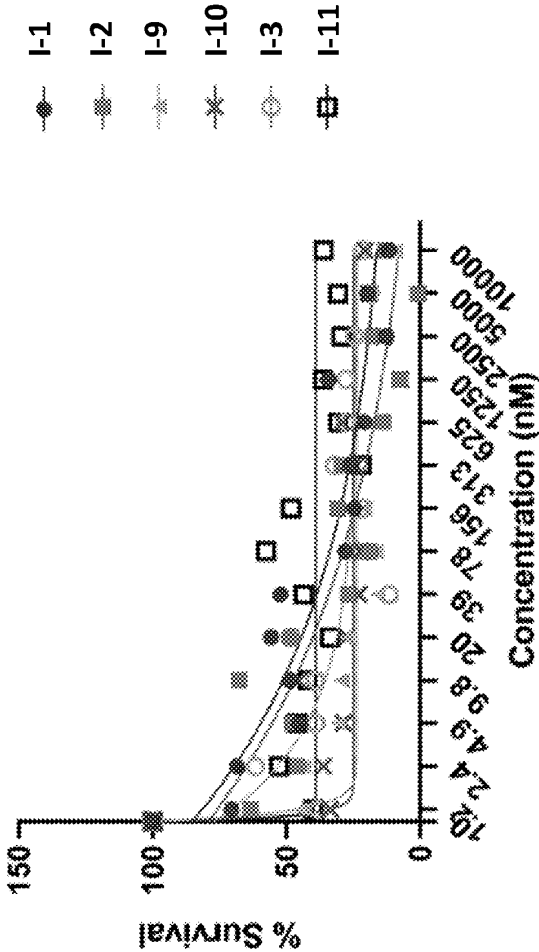


Figure 3

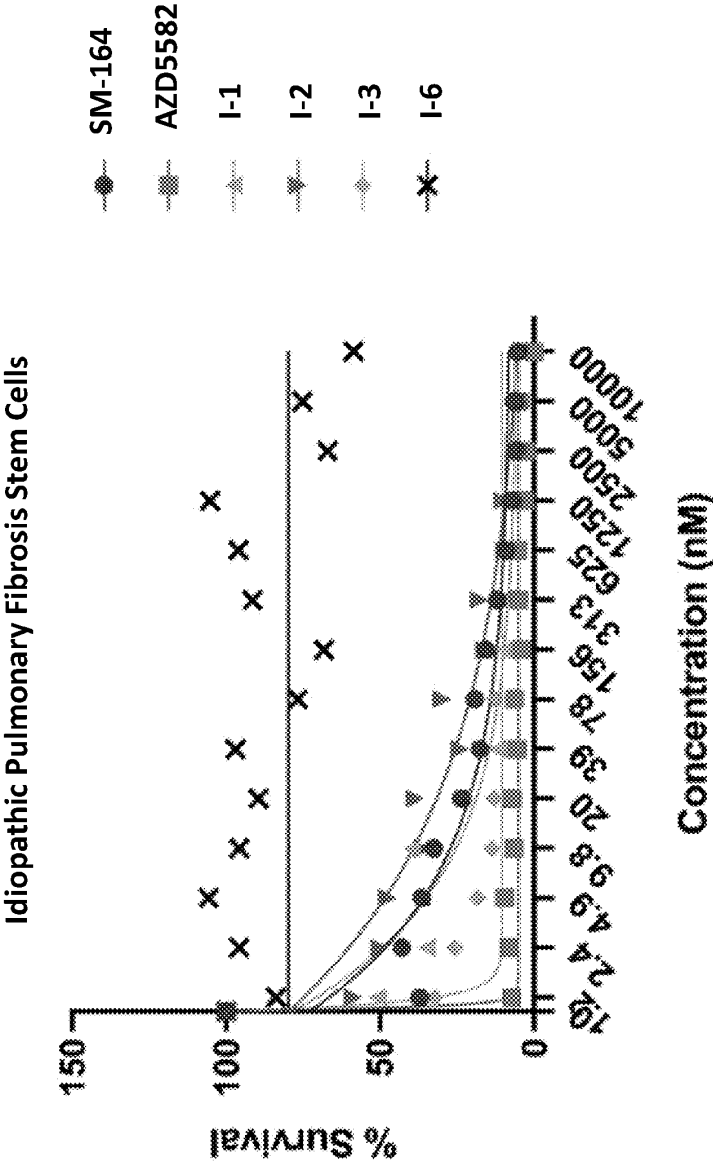


Figure 4

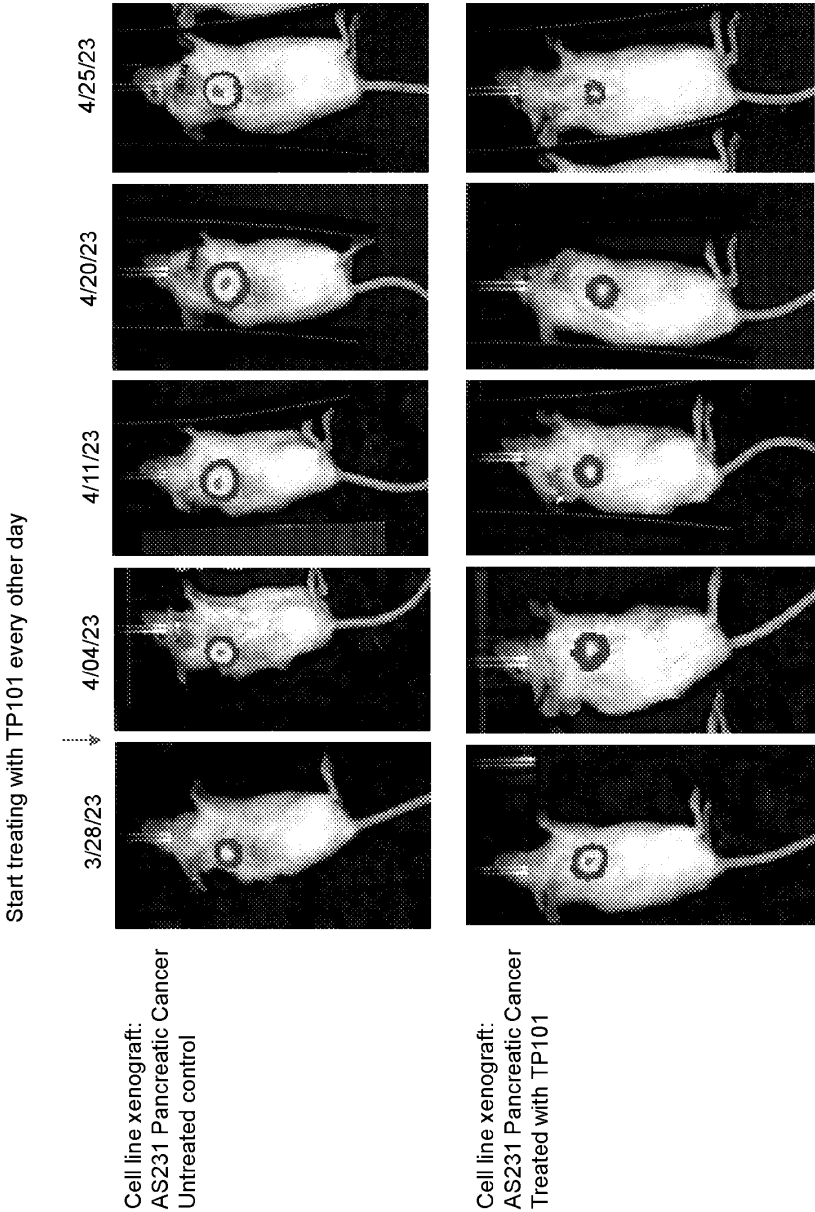


Figure 5

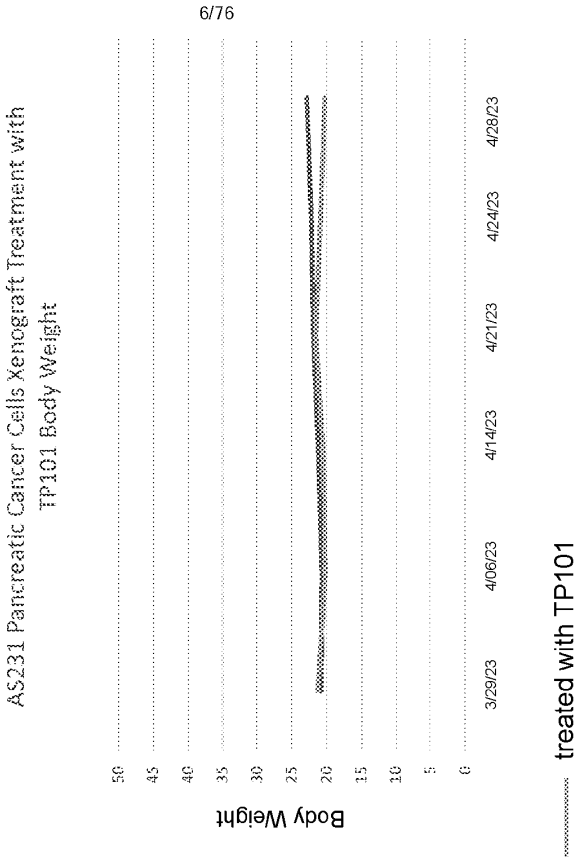


Figure 6B

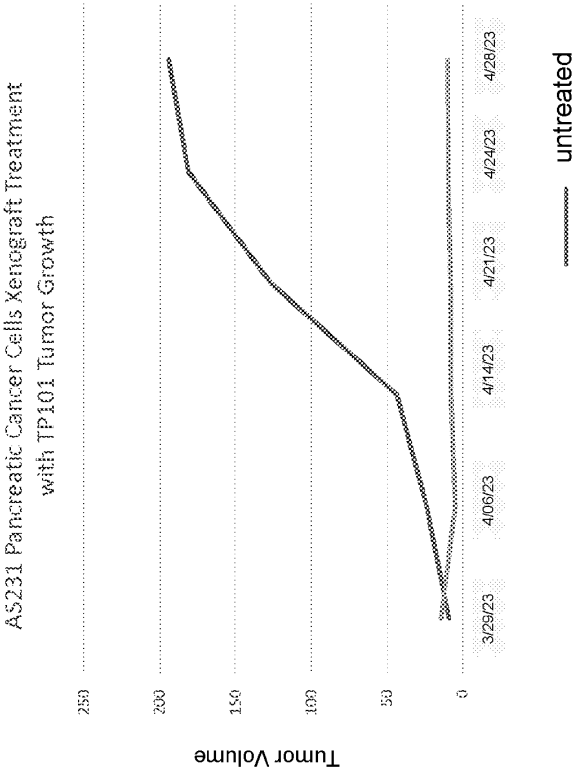


Figure 6A

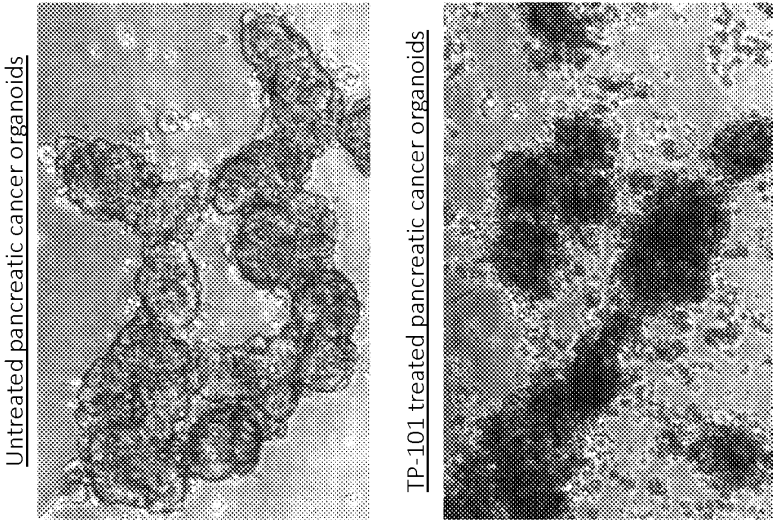


Figure 7B

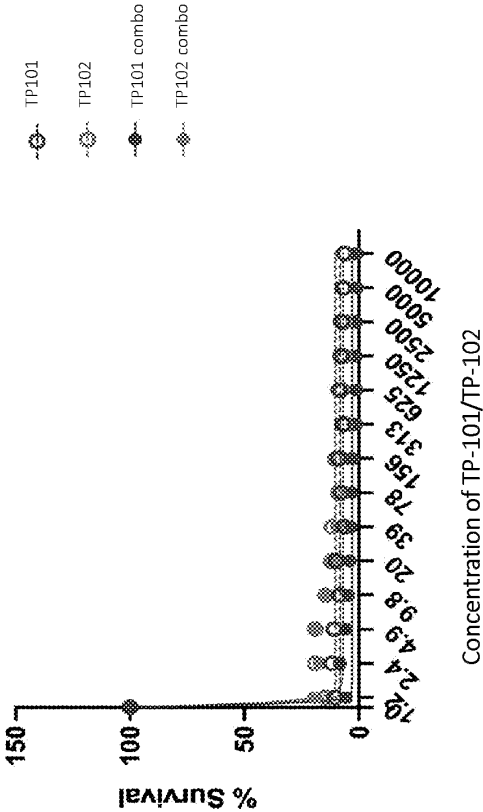


Figure 7A

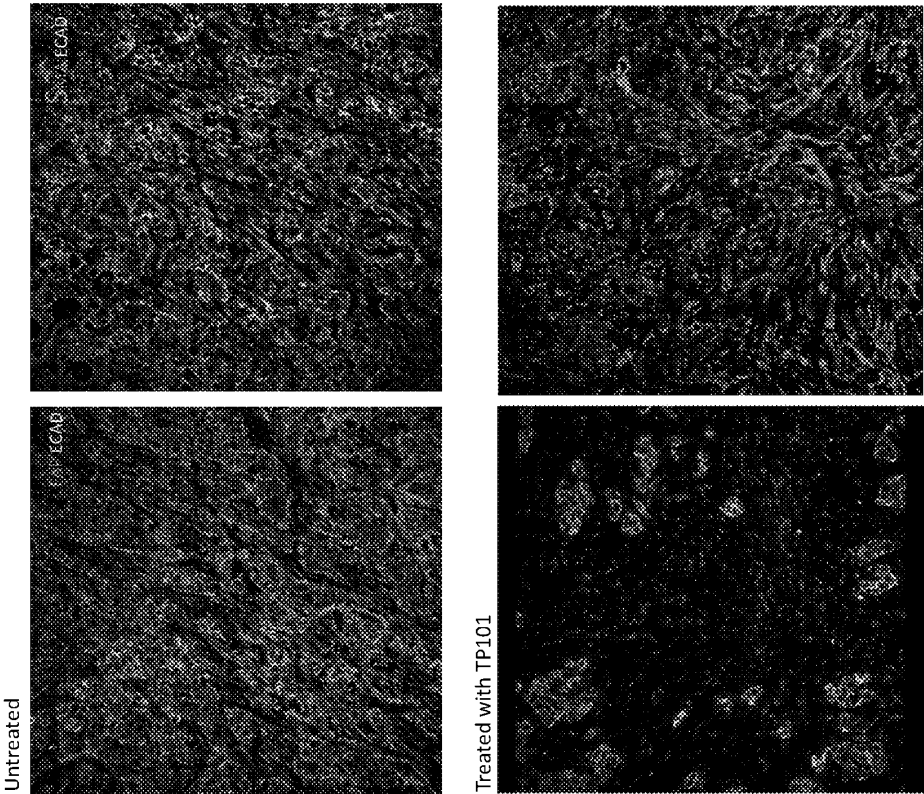
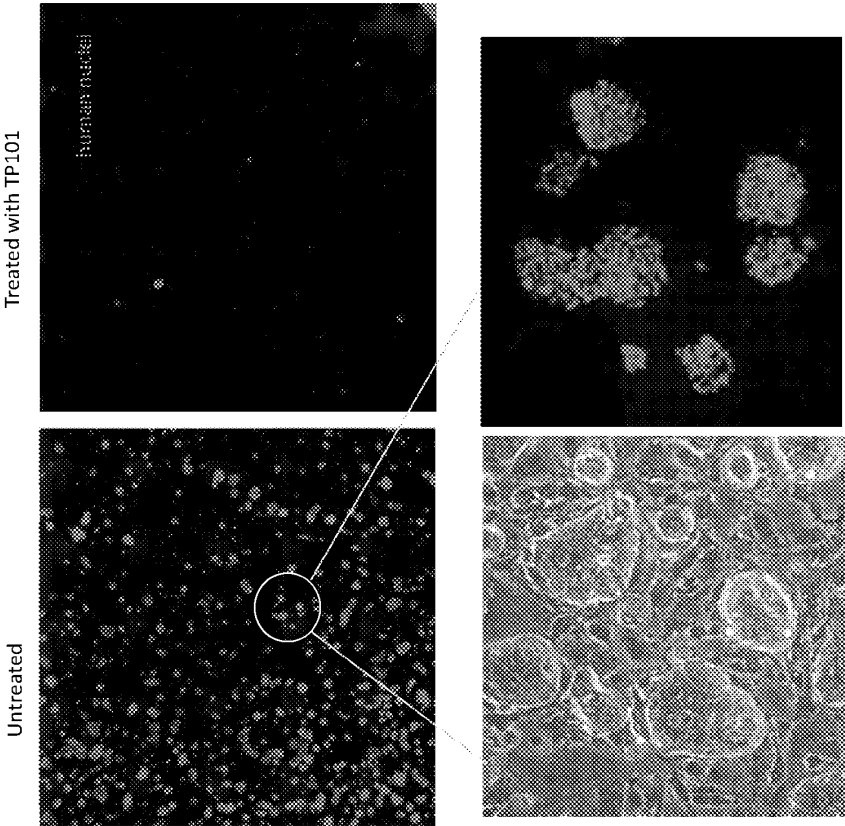


Figure 8



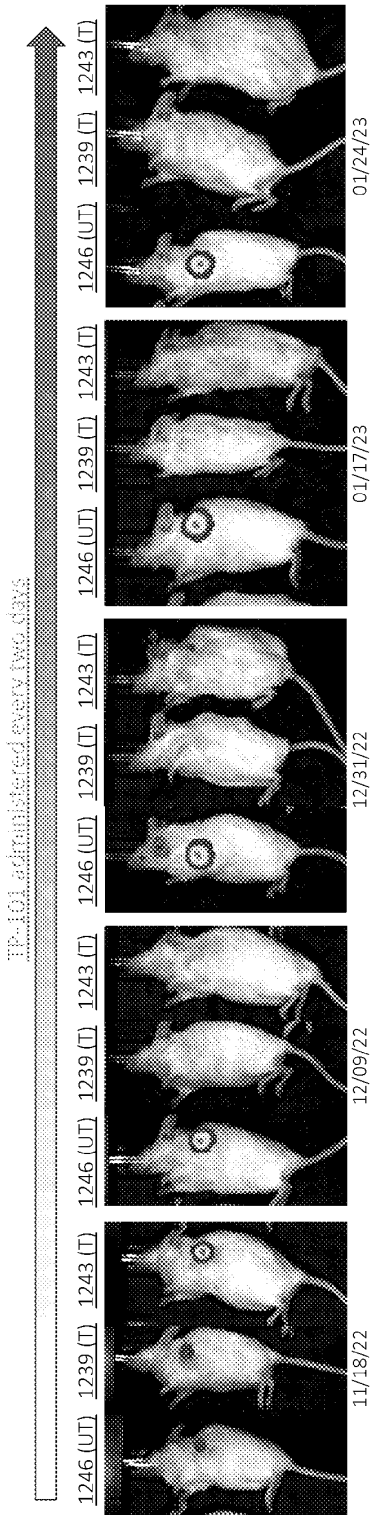


Figure 10A

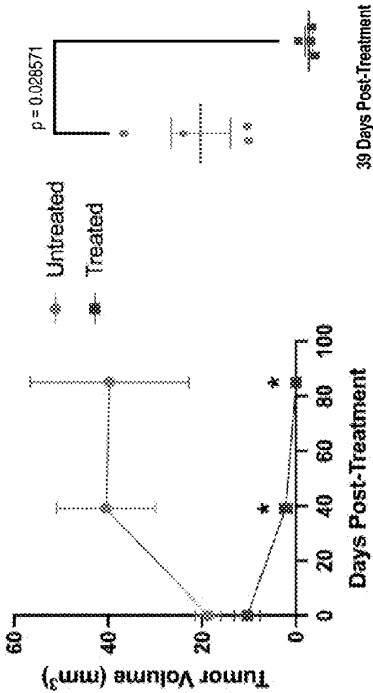


Figure 10B

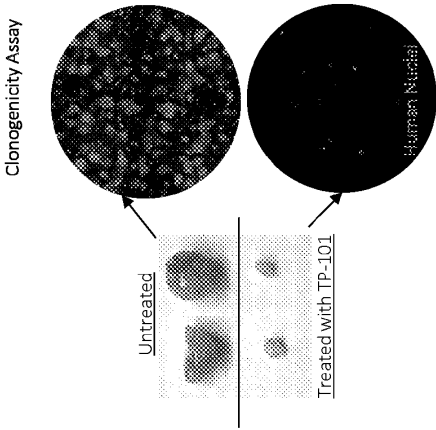


Figure 10C

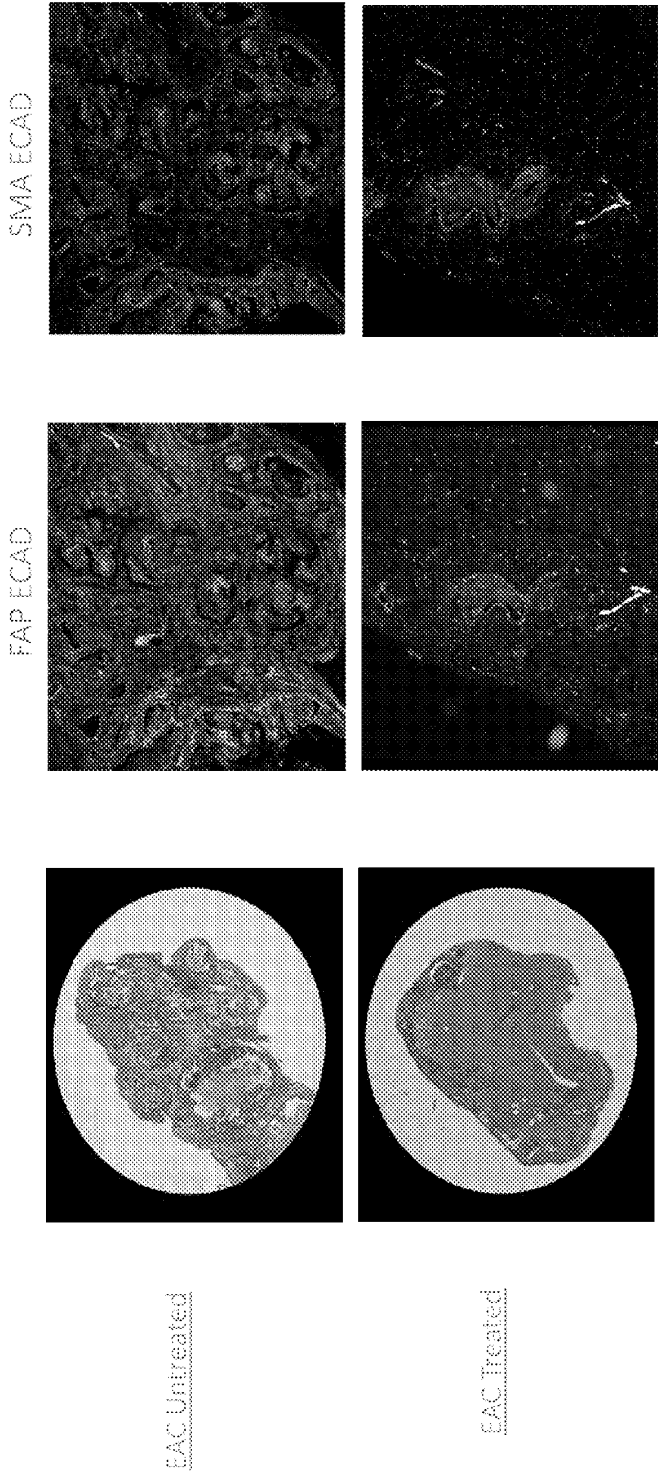


Figure 11

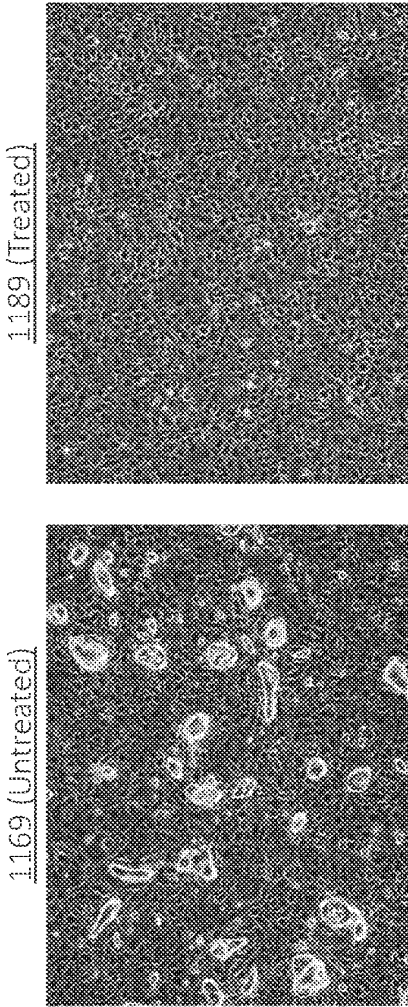


Figure 12A

Figure 12B

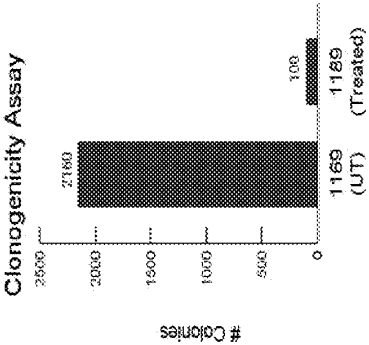


Figure 12C

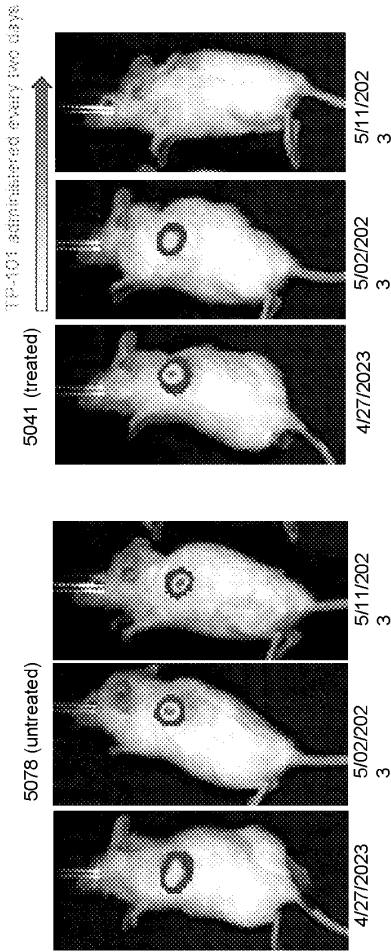


Figure 13

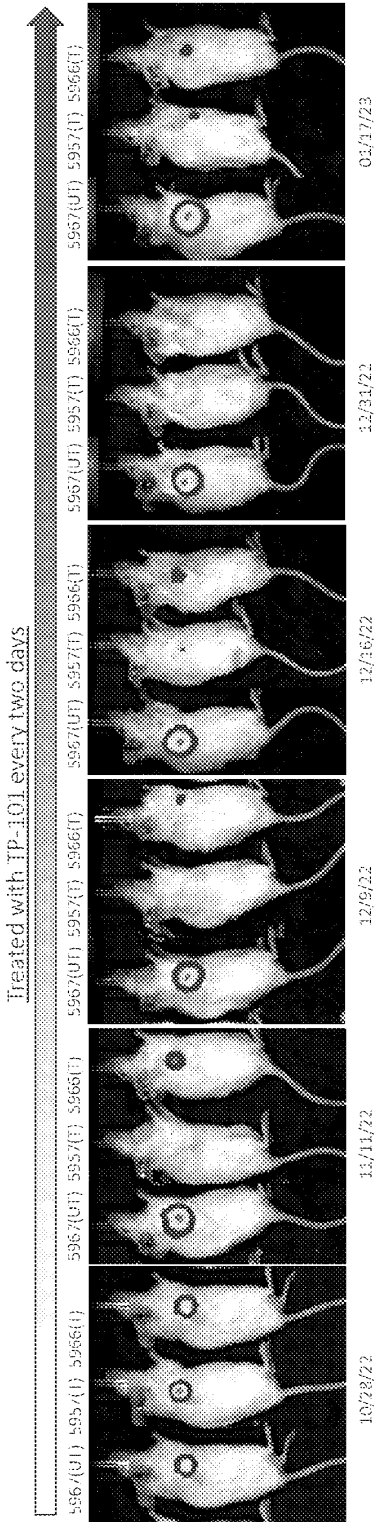


Figure 14A

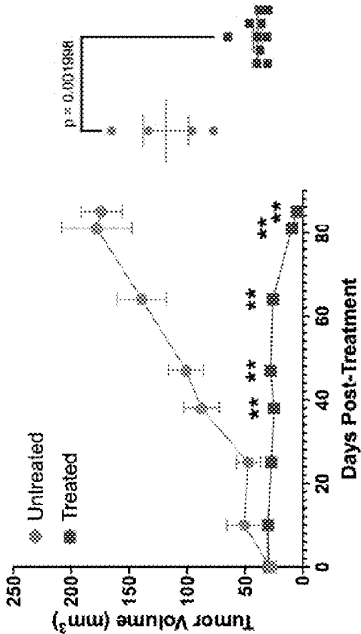


Figure 14B

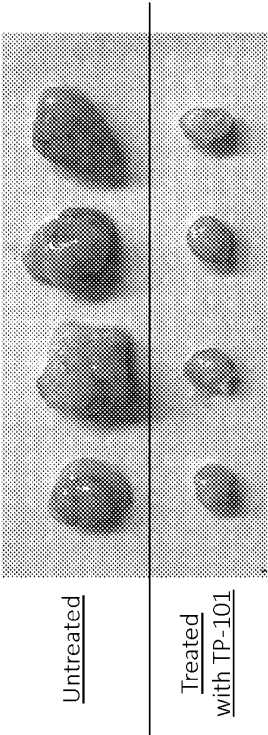


Figure 14C

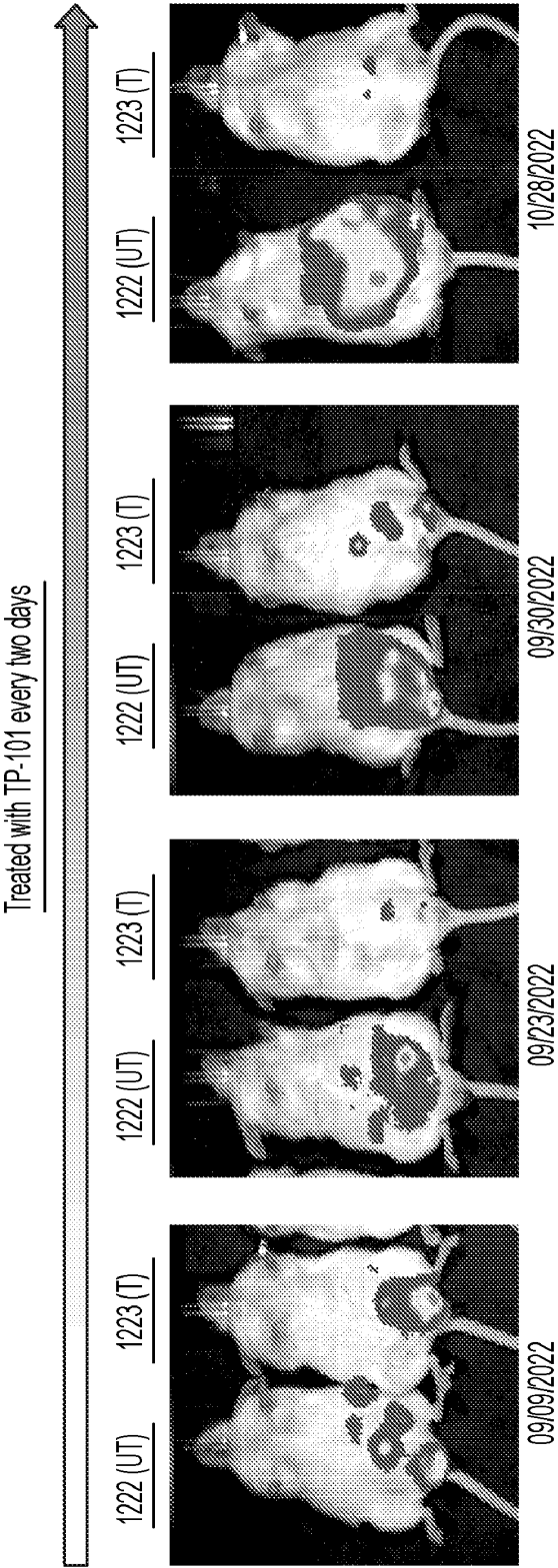


FIG. 15

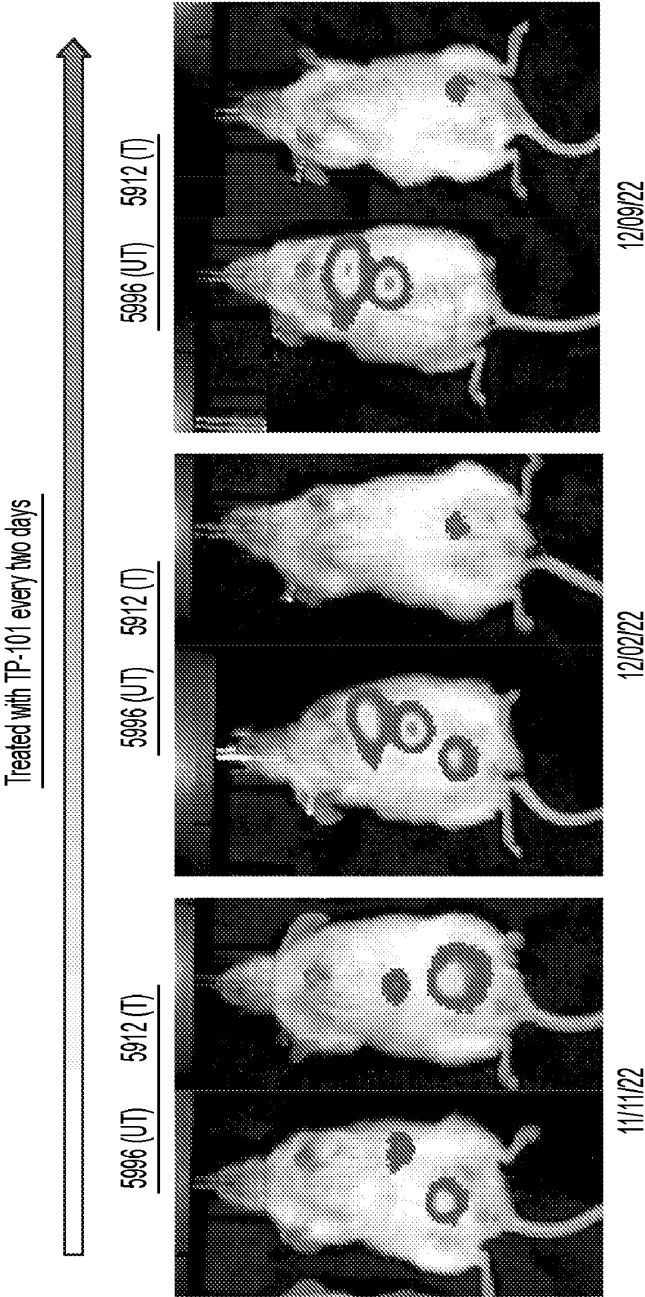


FIG. 16

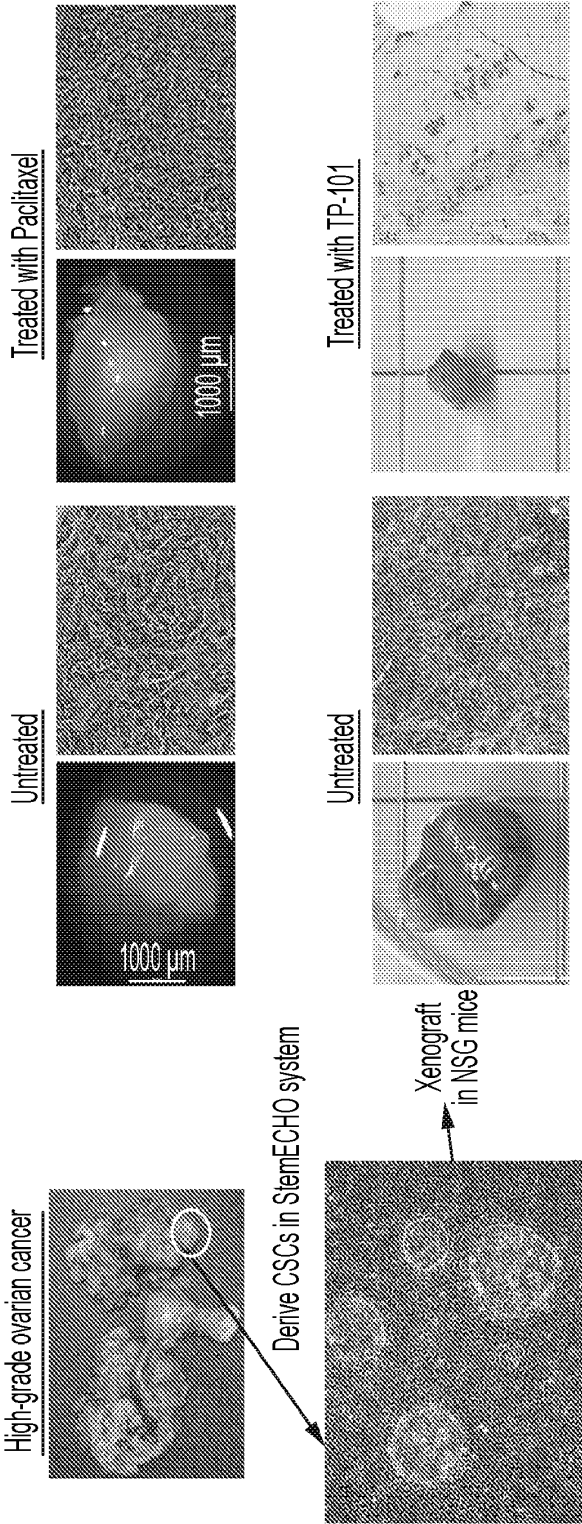


FIG. 17

High-grade Taxol-resistant ovarian tumors

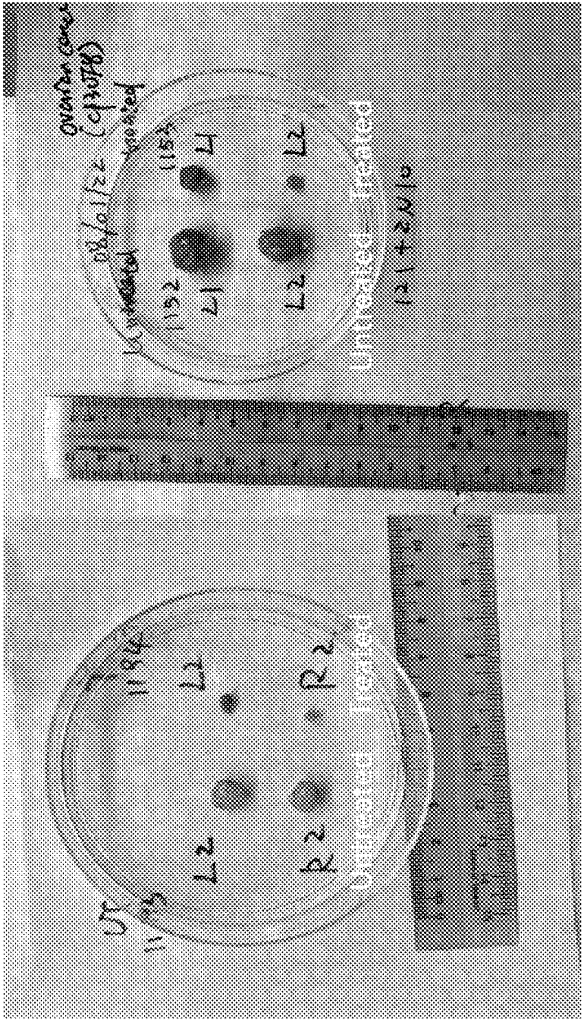


Figure 18

1152 Untreated

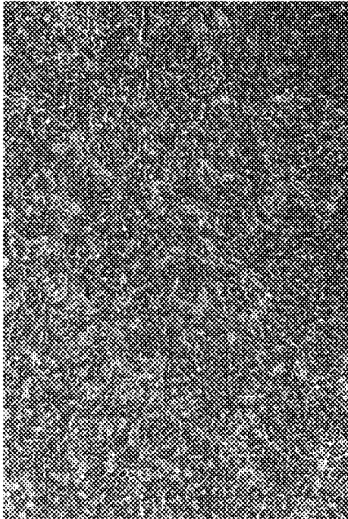


Figure 19A

1153 Treated

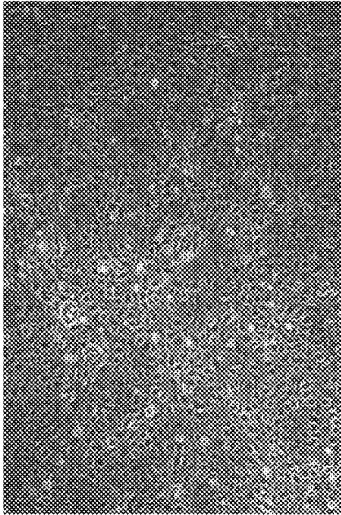
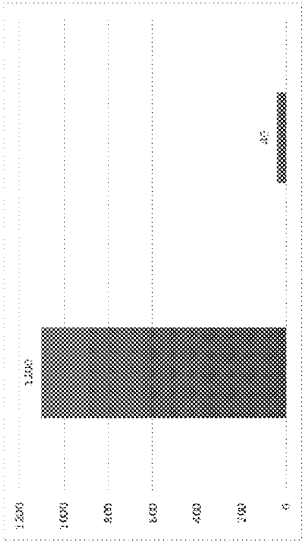


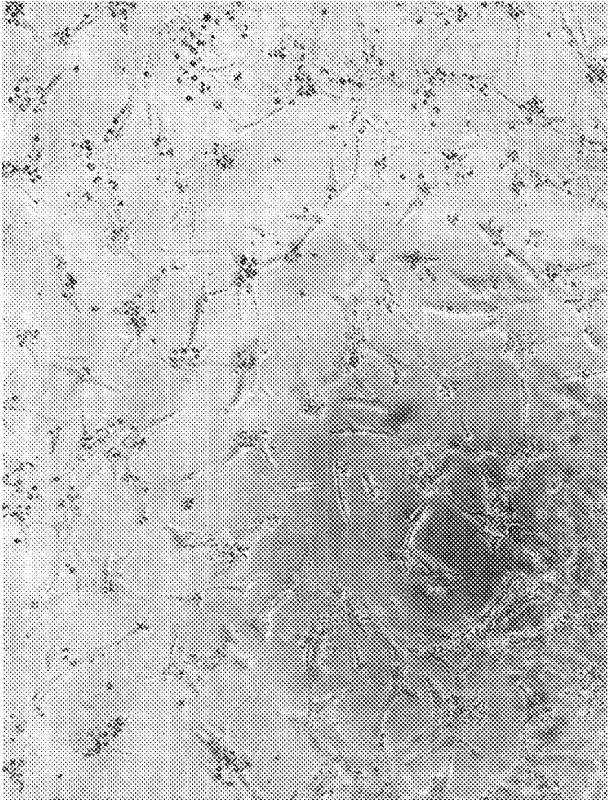
Figure 19B



colony number

Figure 19C

Treated with TP-101



Untreated

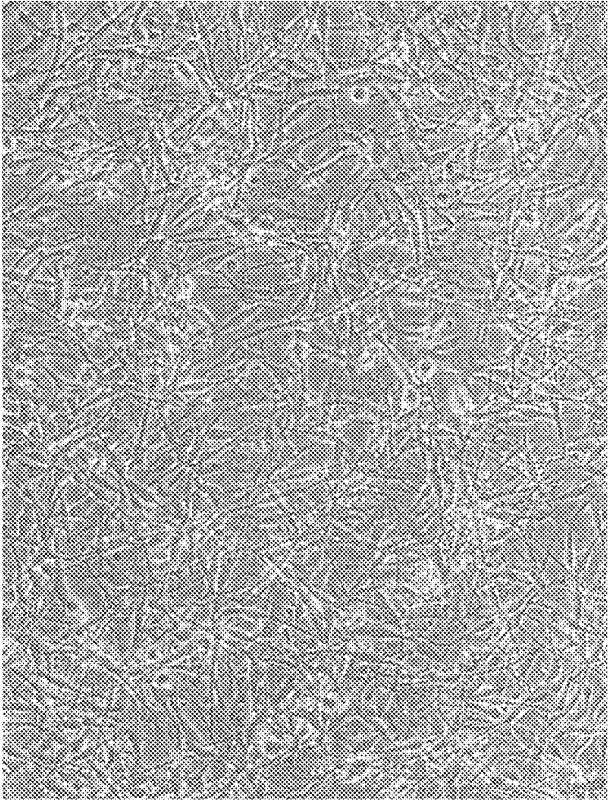
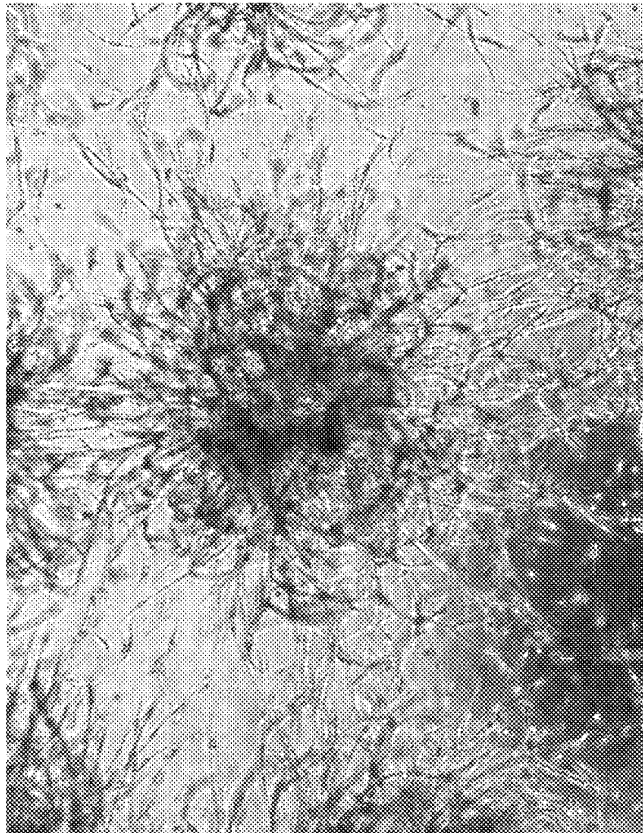


Figure 20

Untreated



Treated with TP-101

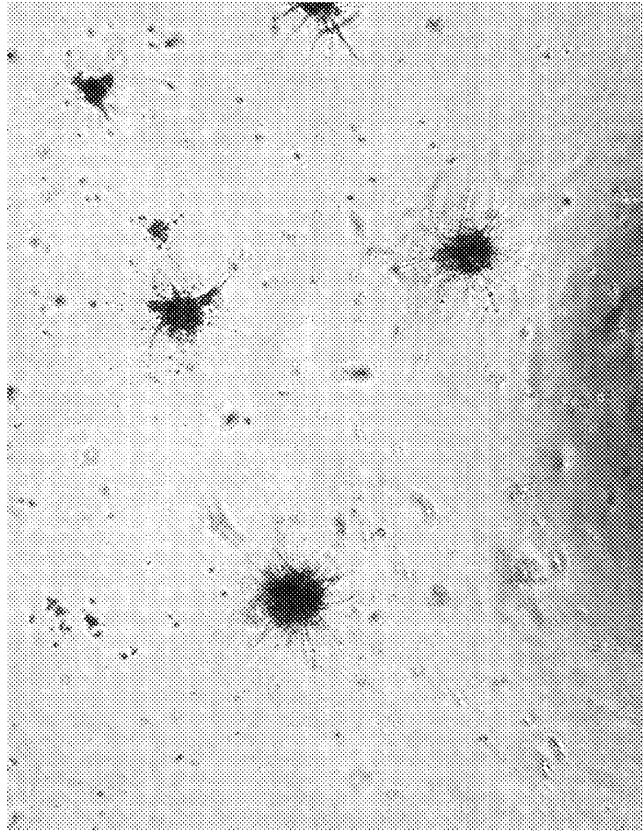
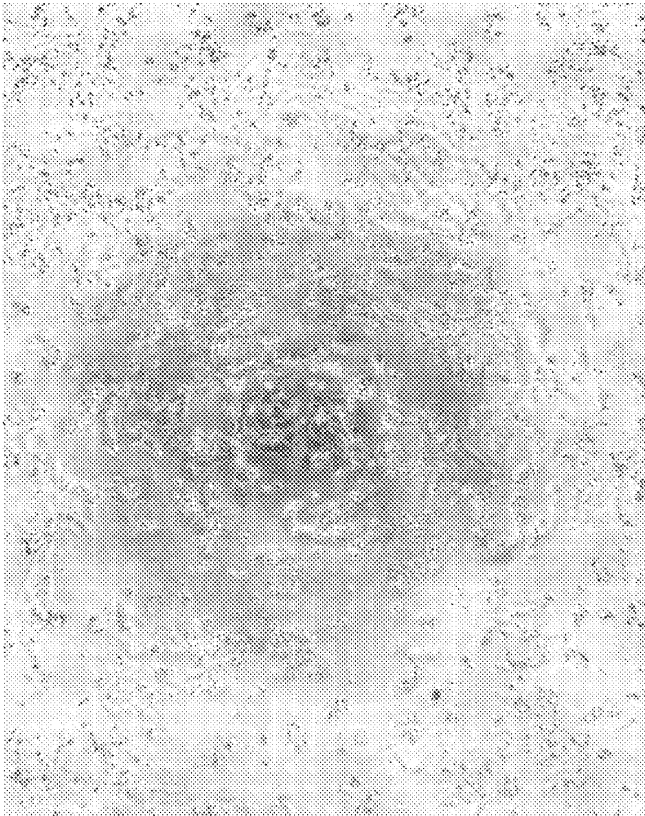


Figure 21

Treated with TP-101



Untreated

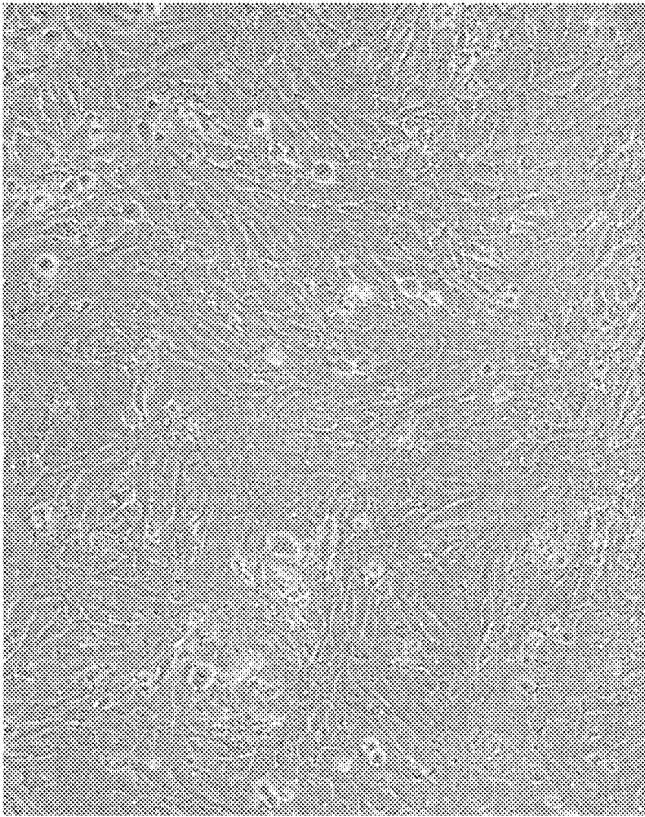


Figure 22

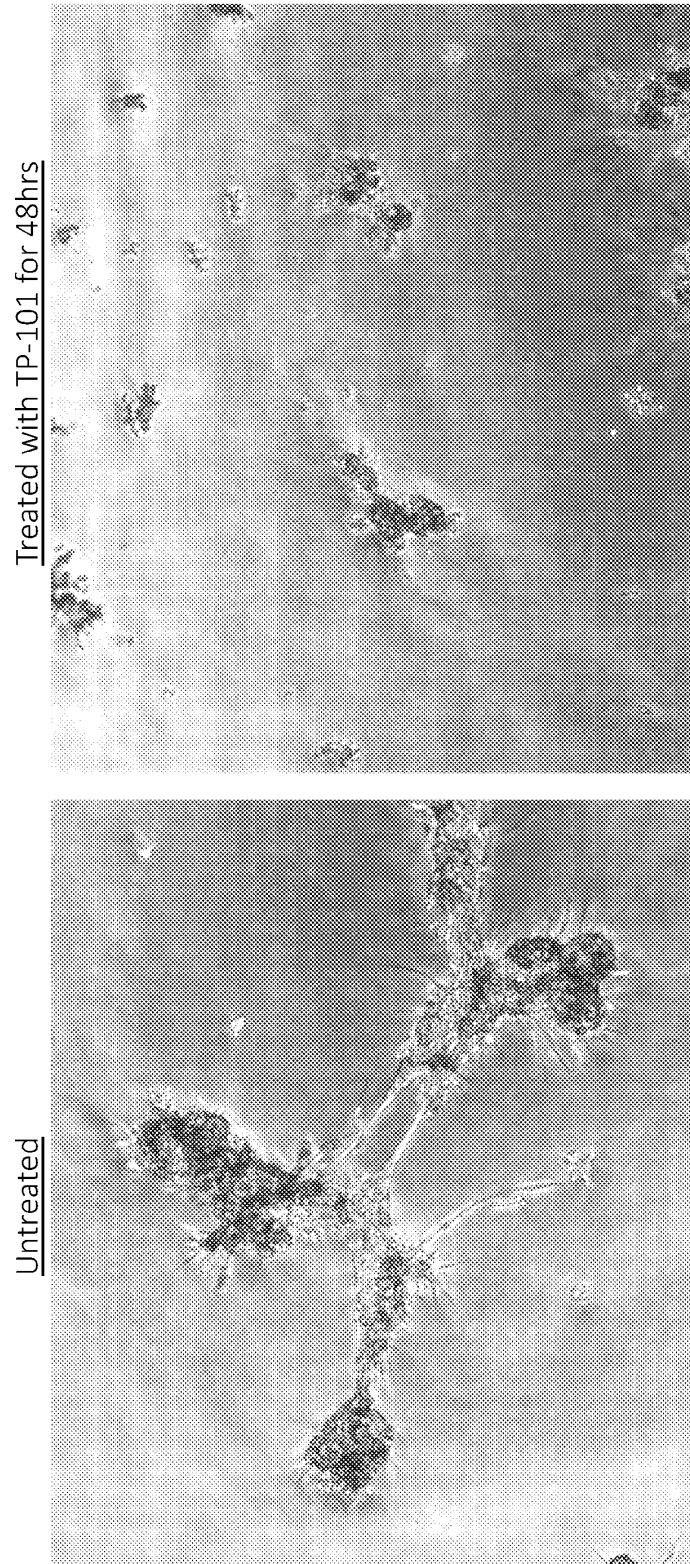


Figure 23

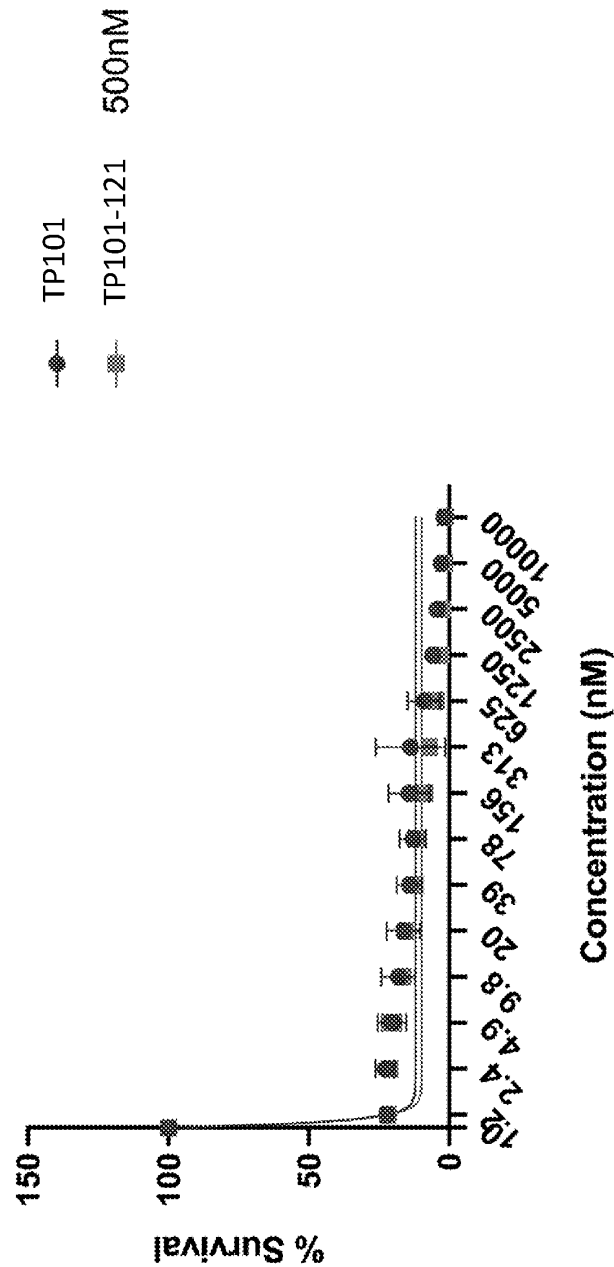
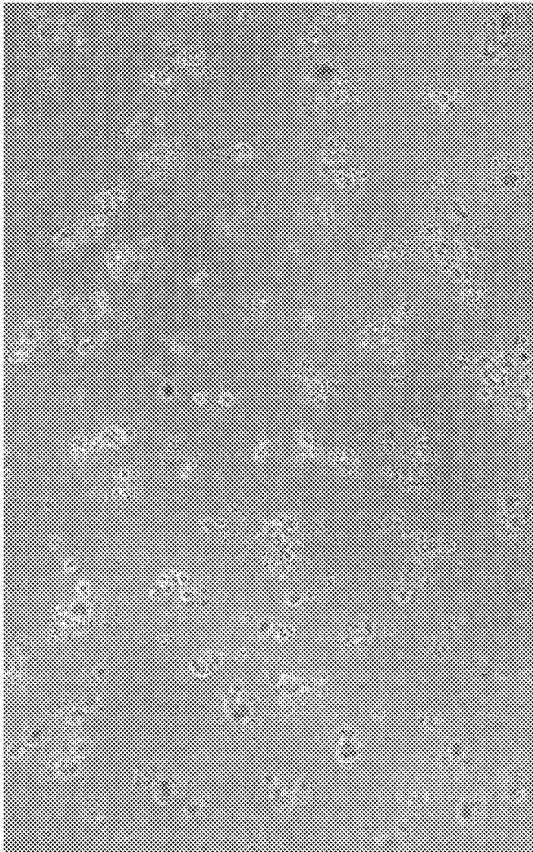


Figure 24

Treated with TP-101



Untreated

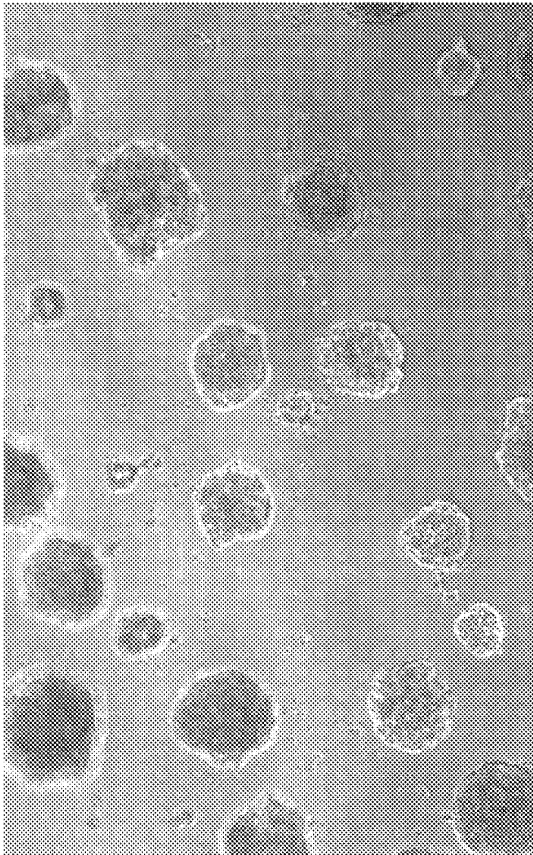
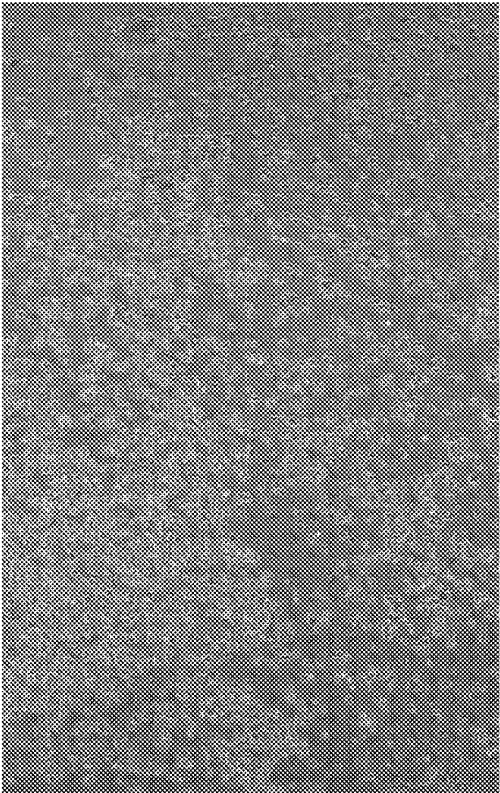


Figure 25

Treated with TP101



Untreated

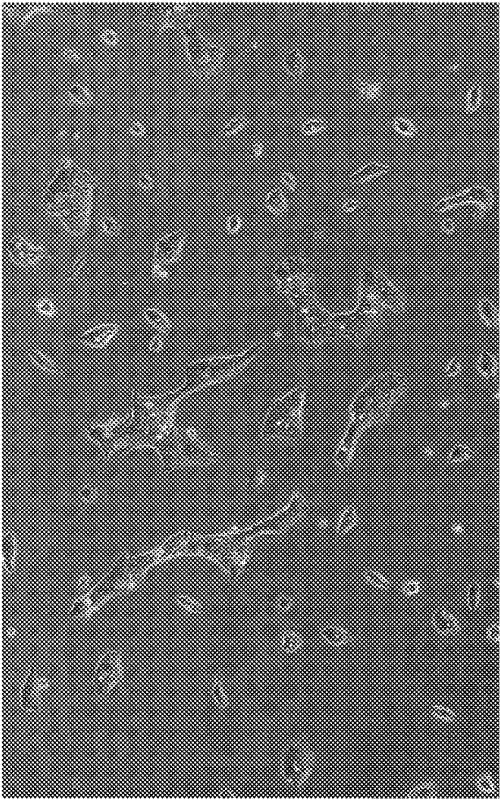
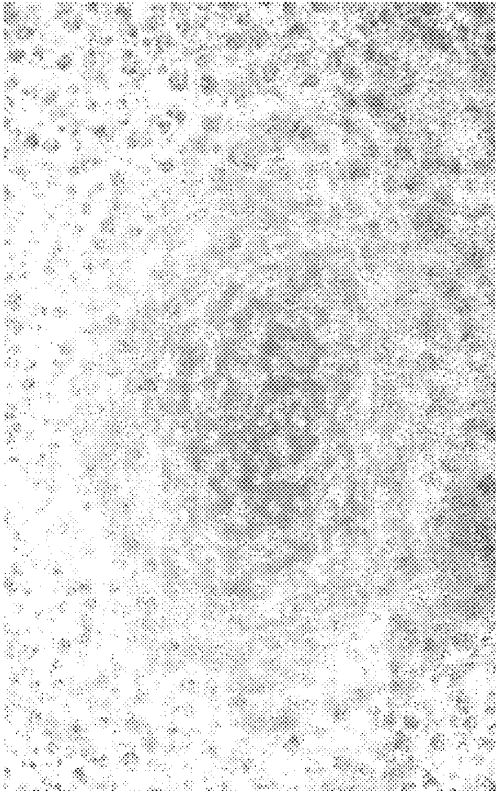


Figure 26

Treated with TP101



Untreated

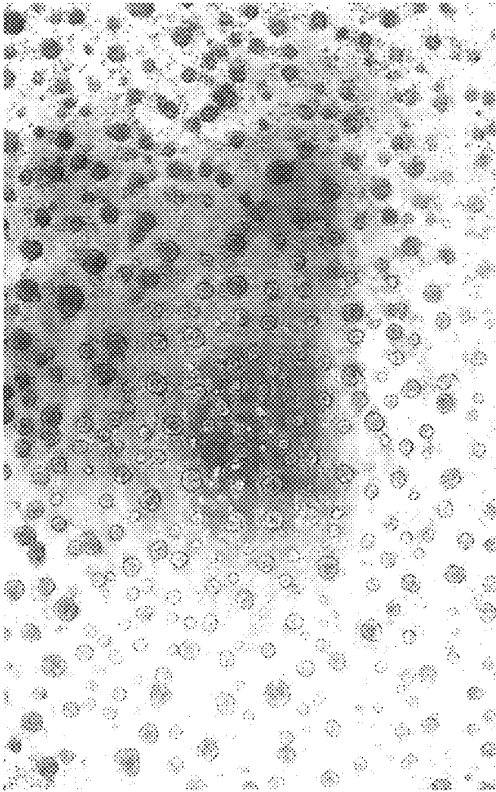


Figure 27

Treated with TP101



Untreated

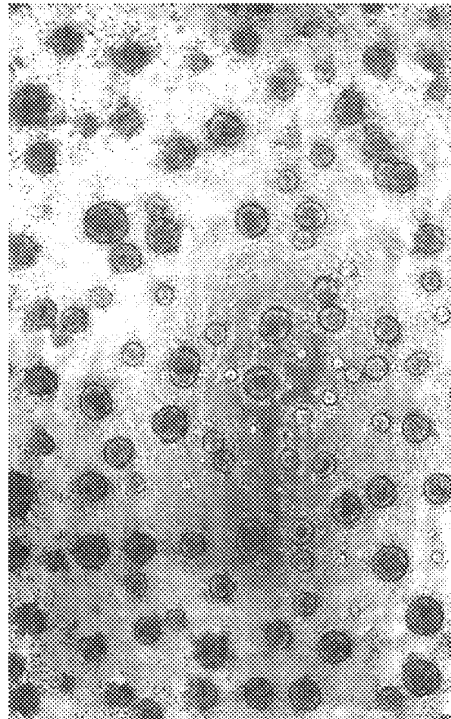


Figure 28

Treated with TP101



Untreated

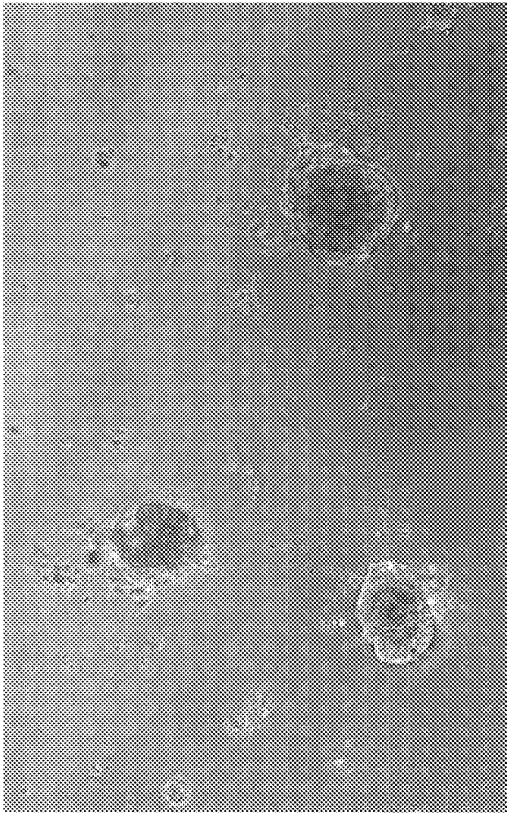


Figure 29

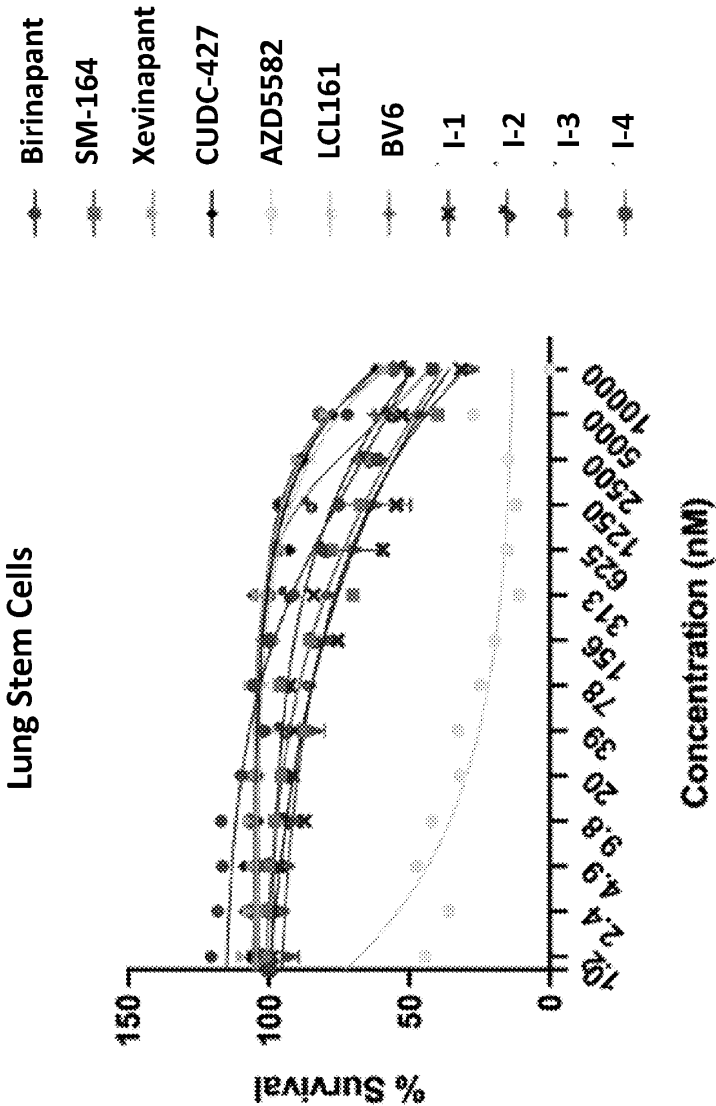


Figure 30

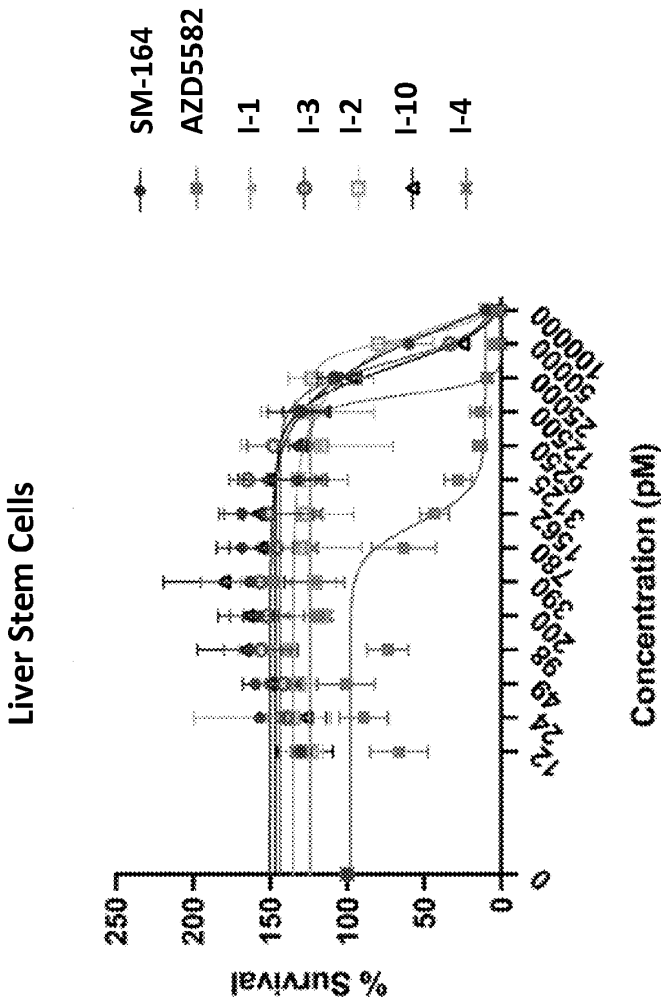
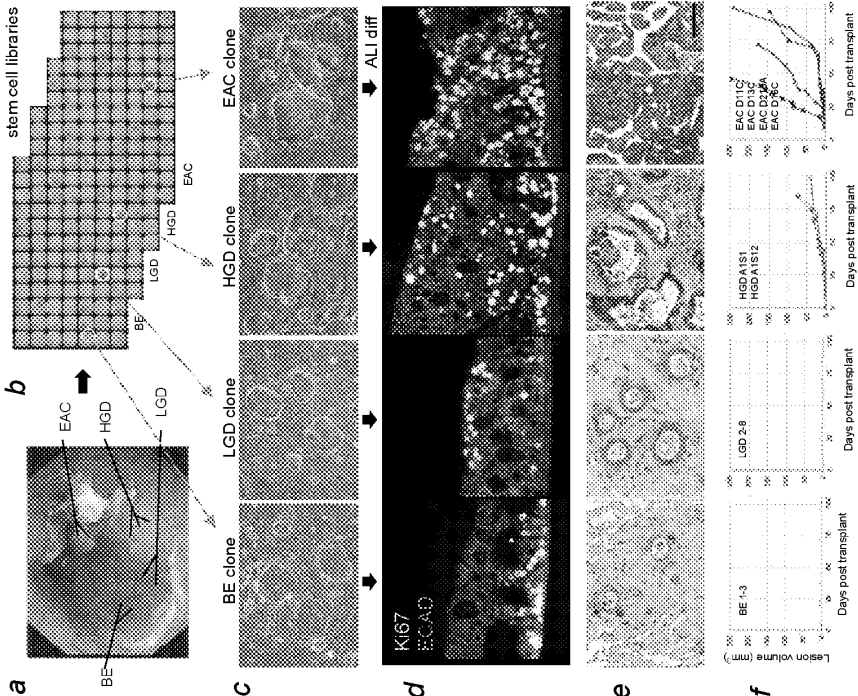


Figure 32



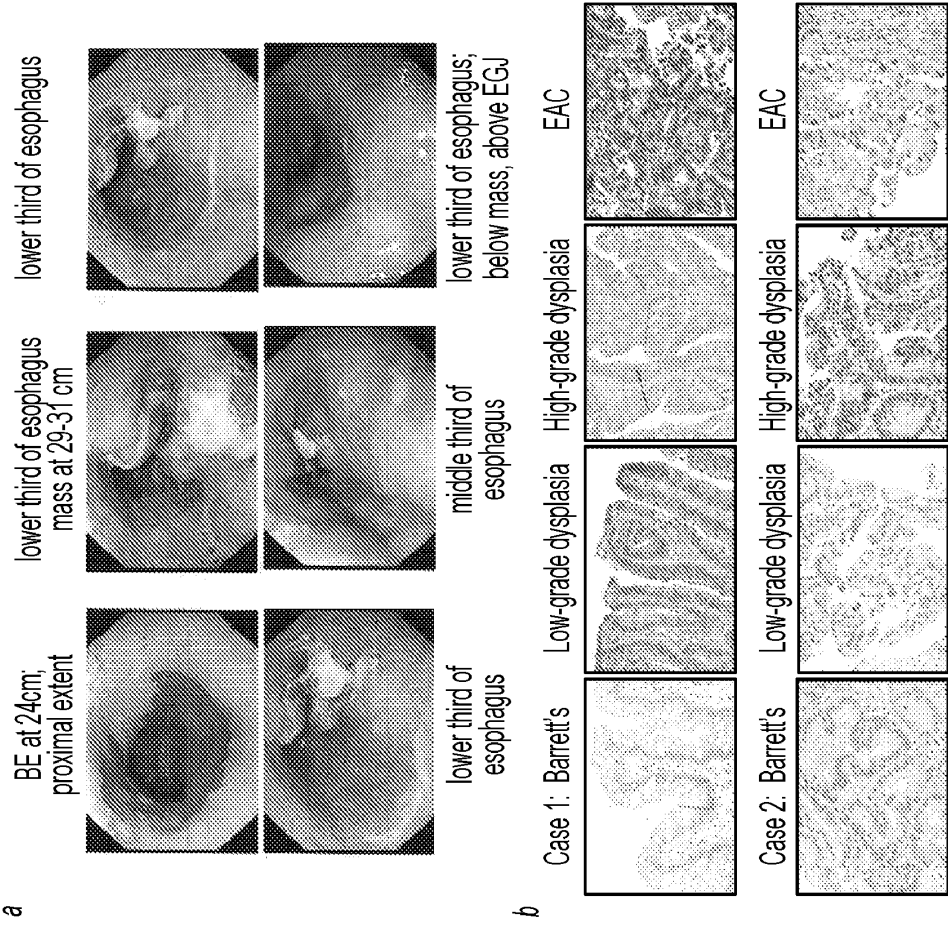


FIG. 33

Fig. 34

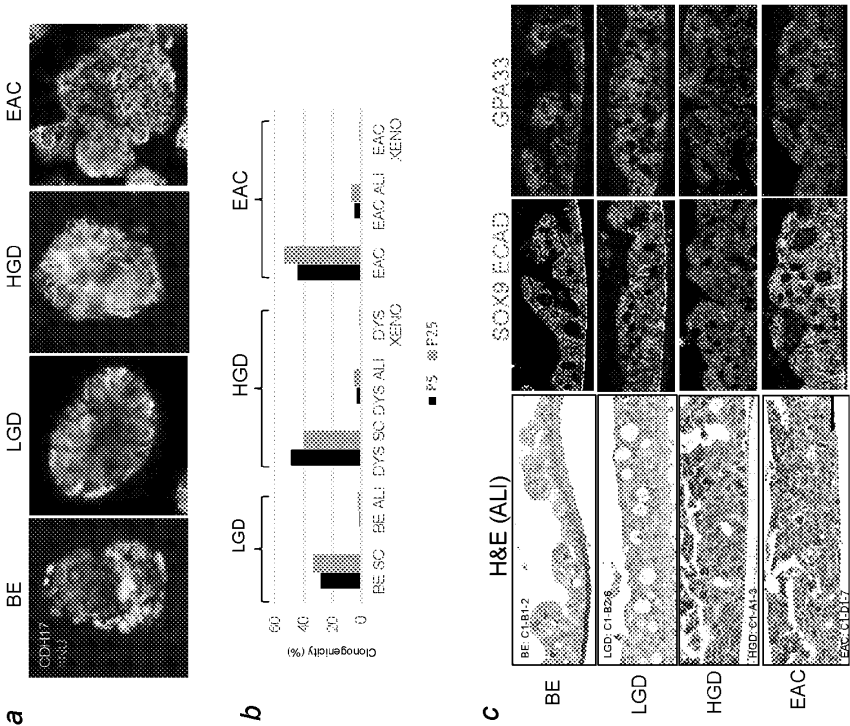
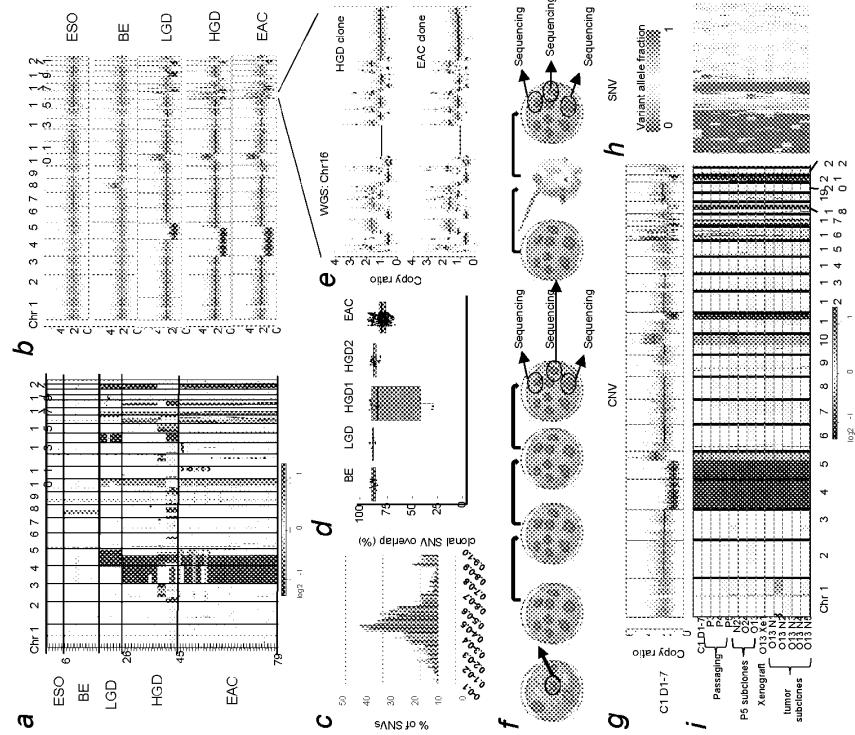
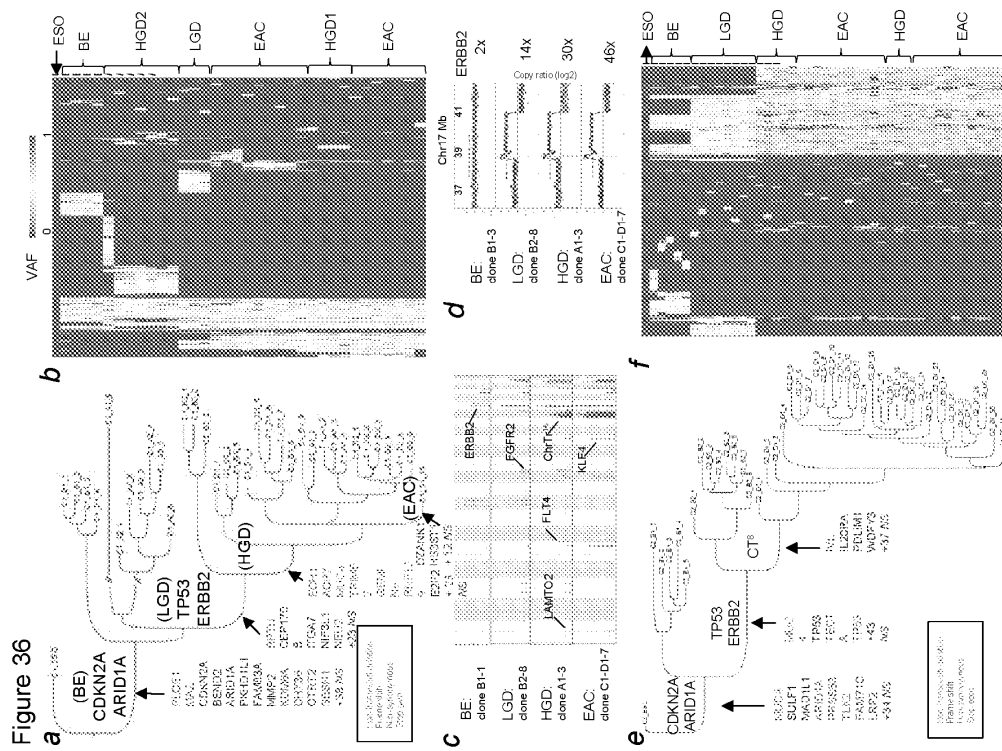


Figure 35





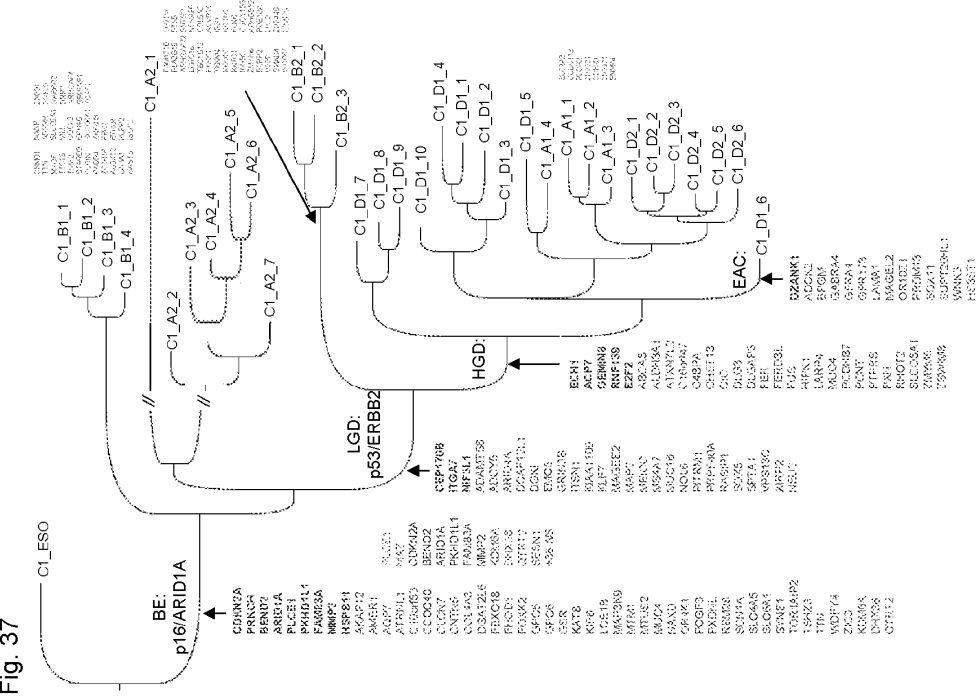
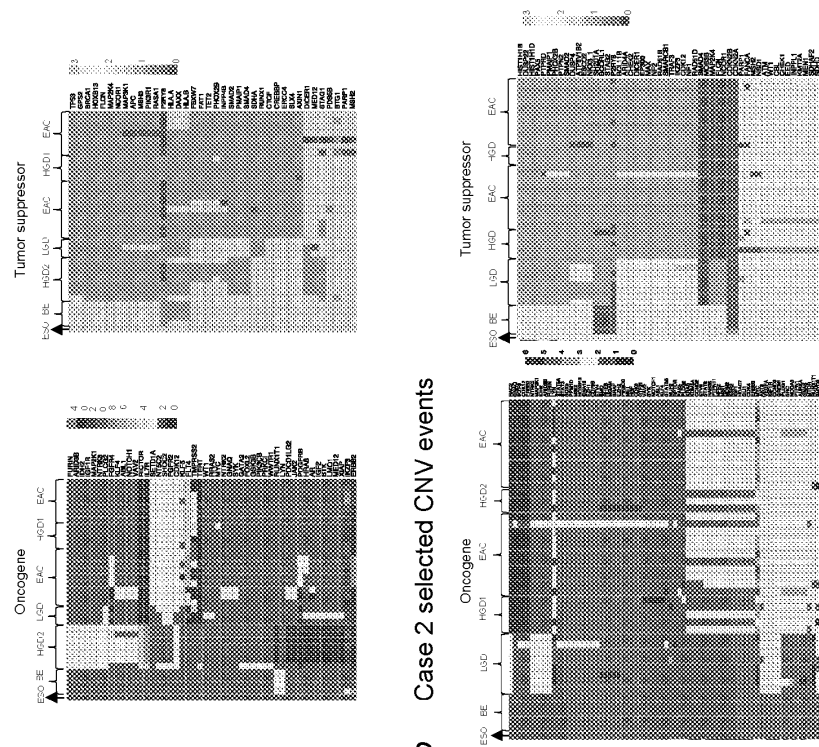


Fig. 38

a Case 1 selected CNV events



b Case 2 selected CNV events

Fig. 39

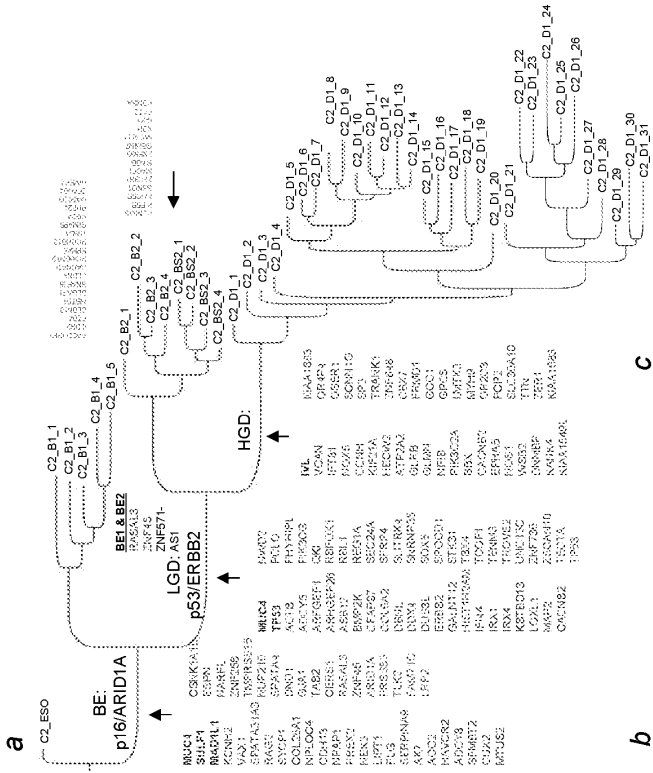


Figure 40

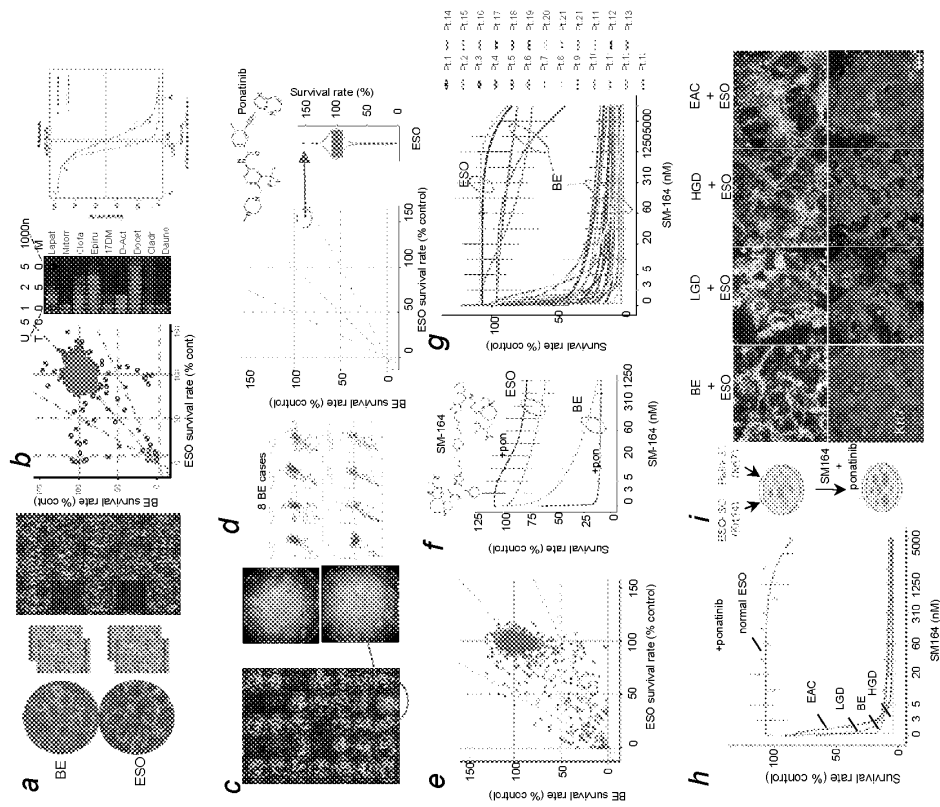


Fig. 41

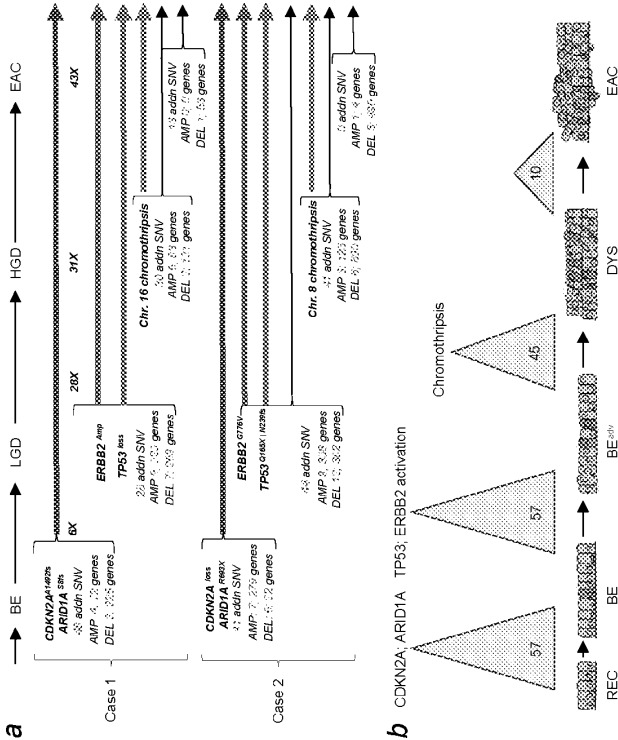


Fig. 42

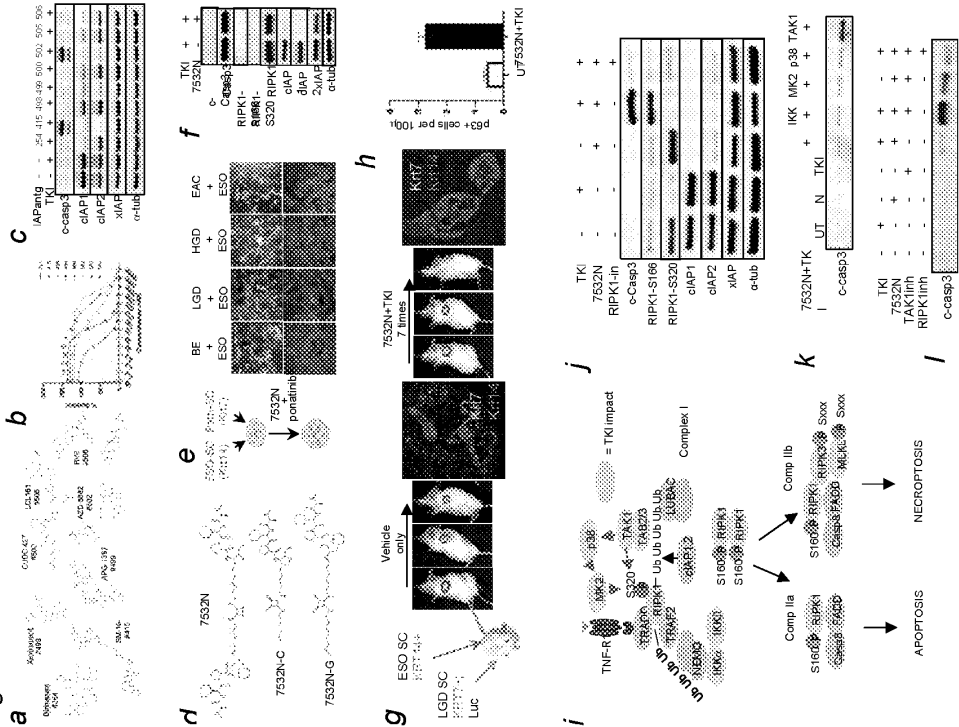


Figure 44

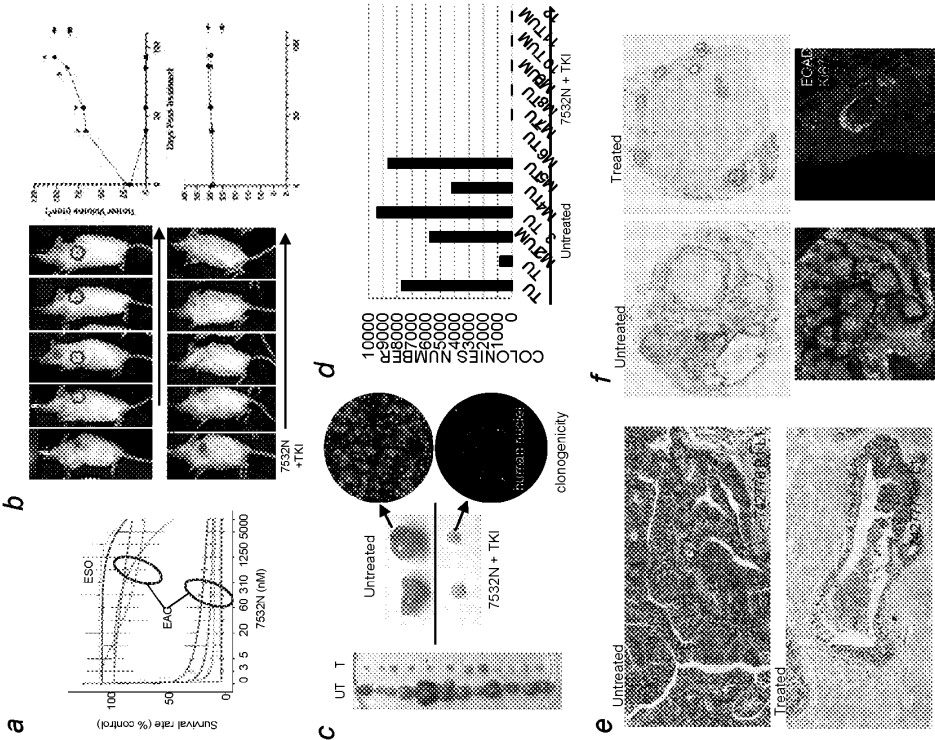


Fig. 45: Known cancer driver mutations in Case 1

Evolution Phase	Gene symbol	Consensus Score	Driver Level	Oncogene of OncoVar	Ensembl ID	Al- DriverGene
BE	ARID1A	50	4	Y	ENSG00000117713	Y
BE	KDM6A	50	4	Y	ENSG00000147050	Y
BE	CDKN2A	49	4	Y	ENSG00000147889	Y
BE	AMER1	35	4	Y	ENSG00000184675	N
BE	GPC5	12	3	N	ENSG00000179399	N
BE	MUC4	11	3	N	ENSG00000145113	N
BE	PKHD1L1	10	2	N	ENSG00000205038	N
BE	MTM1	10	2	N	ENSG00000269031	Y
BE	TTN	10	2	N	ENSG00000155657	Y
BE	SESN1	10	2	N	ENSG00000080546	N
BE	MMP2	2	2	N	ENSG00000087245	N
BE	PLCE1	1	1	N	ENSG00000138193	N
BE	AKAP12	1	1	N	ENSG00000131016	N
BE	CNTN5	1	1	N	ENSG00000149972	N
BE	SLC4A5	1	1	N	ENSG00000188687	N
BE	SYNE1	1	1	N	ENSG00000131018	N
BE	TSHZ3	1	1	N	ENSG00000121297	N
BE	ARHGA4	11	3	N	ENSG00000032219	N
BE	MUC3B	10	2	N	ENSG00000131143	N
BE	WFS13C	10	2	N	ENSG00000139003	Y
BE	ITGA7	1	1	N	ENSG00000135474	N
BE	ITSM1	1	1	N	ENSG00000205776	N
BE	KIAA1109	1	1	N	ENSG00000138688	N
BE	XHEP2	1	1	N	ENSG00000163992	N
DYS	CIC	48	4	Y	ENSG00000079432	Y
DYS	FUS	23	4	Y	ENSG00000089280	N
DYS	ZNF521	20	4	Y	ENSG00000198795	N
DYS	MUC4	11	3	N	ENSG00000145113	N
DYS	PTPRS	10	2	N	ENSG00000105426	N
DYS	PCMT	10	2	N	ENSG00000160299	N
DYS	PLCG2	10	2	N	ENSG00000197943	N
DYS	E2F2	1	1	N	ENSG000000007968	N
DYS	LARP4	1	1	N	ENSG00000161813	N
DYS	ZNF471	1	1	N	ENSG00000196263	N
EAC	TPR3	10	2	N	ENSG00000169311	Y
EAC	LAMA1	10	2	N	ENSG00000101640	N
EAC	WDR43	1	1	N	ENSG00000131230	N

Figure 46: Known cancer driver mutations in Case 2

Evolution phase	Gene symbol	Consensus Score	Driver Level	Oncogene of OncoVar	Ensembl ID	Alt- DriverGene
BE	ARID1A	50	4	Y	ENSG000000117713	Y
BE	PREX2	30	4	Y	ENSG000000046889	N
BE	MUC4	11	3	N	ENSG000000145113	N
BE	FLG	11	3	N	ENSG000000143631	N
BE	TMPRSS15	10	2	N	ENSG000000154646	N
BE	GIA1	1	1	N	ENSG000000152661	N
BE	MAD1L1	1	1	N	ENSG000000002822	N
BE	NPLOC4	1	1	N	ENSG000000182446	N
BE	CDH13	1	1	N	ENSG000000140945	N
BE	CSNK1A1L	1	1	N	ENSG000000180138	N
BE	SPATA4	1	1	N	ENSG000000150628	N
BE	DND1	1	1	N	ENSG000000256453	N
BE	TIK2	1	1	N	ENSG000000146872	N
BE	TP53	50	4	Y	ENSG000000121510	Y
BE	ERBB2	50	4	Y	ENSG000000131746	Y
BE	UHRF1	22	4	Y	ENSG000000125331	N
BE	SERP4	21	4	Y	ENSG000000106433	N
BE	RHSG5	14	4	N	ENSG000000105853	N
BE	RFX4	11	3	N	ENSG000000145333	N
BE	ACTB	11	3	N	ENSG000000075624	N
BE	DDX4	10	2	N	ENSG000000152670	N
BE	HST1H2AM	10	2	N	ENSG000000233224	N
BE	PCLG	10	2	N	ENSG000000186472	N
BE	ARHGAP31	3	1	N	ENSG000000046772	N
BE	IRX1	1	1	N	ENSG000000170549	N
BE	RBL3	1	1	N	ENSG000000169446	N
BE	SEC24A	1	1	N	ENSG000000114635	N
BE	STK31	1	1	N	ENSG000000196135	N
DYS	MYH9	24	4	Y	ENSG000000100345	N
DYS	NFB	22	4	Y	ENSG000000147862	N
DYS	EPHA5	20	4	Y	ENSG000000145242	Y
DYS	GPC5	12	3	N	ENSG000000179399	N
DYS	TTN	10	2	N	ENSG000000155657	Y
DYS	ATP2A2	1	1	N	ENSG000000174437	N
DYS	PIK3CA	1	1	N	ENSG000000001405	N
DYS	SP3	1	1	N	ENSG0000000172845	N
DYS	CBX7	1	1	N	ENSG000000100307	N
DYS	PDLIM1	1	1	N	ENSG000000107438	N
DYS	DNM1BP	1	1	N	ENSG0000000107554	N

Figure 47

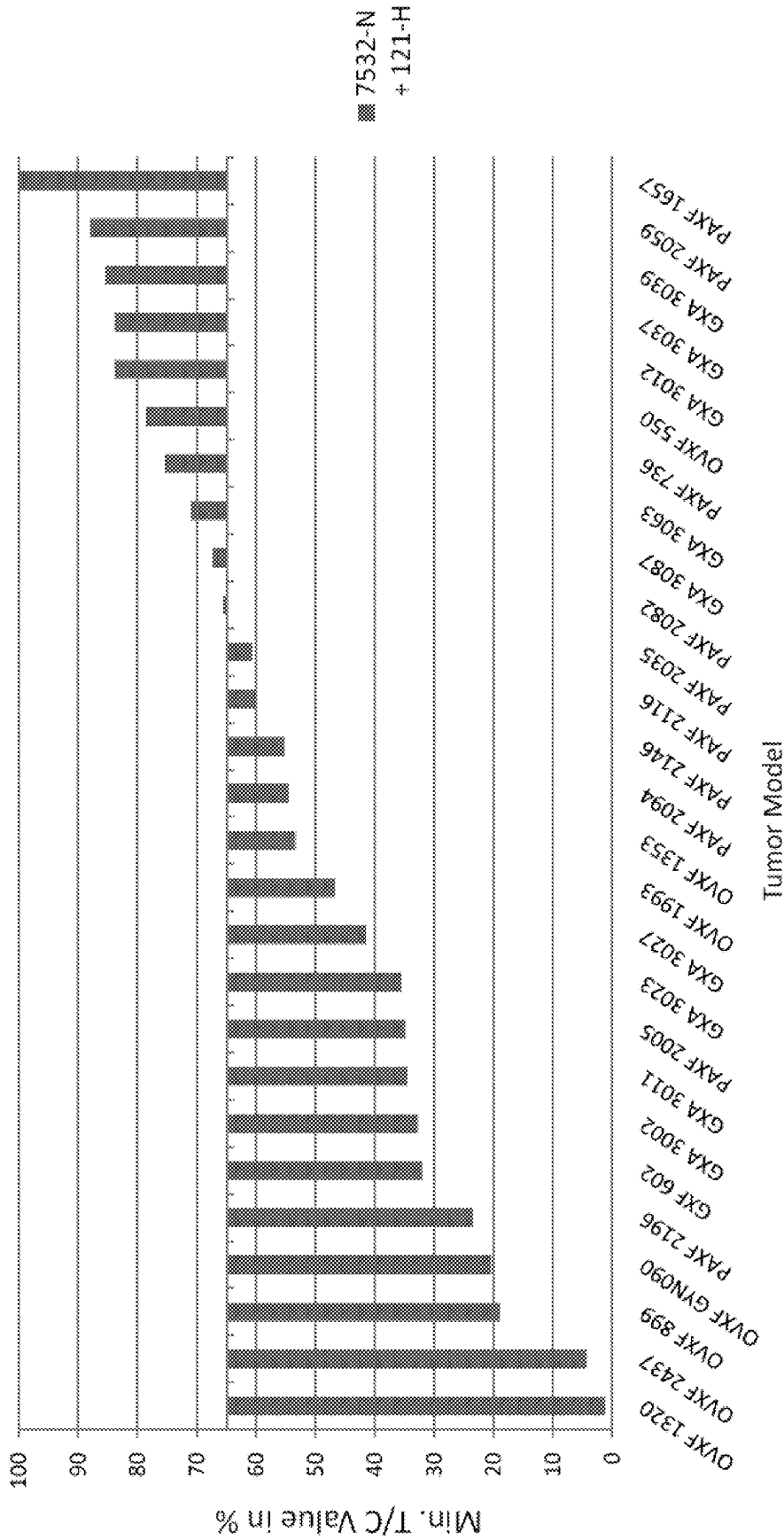


Fig. 48A

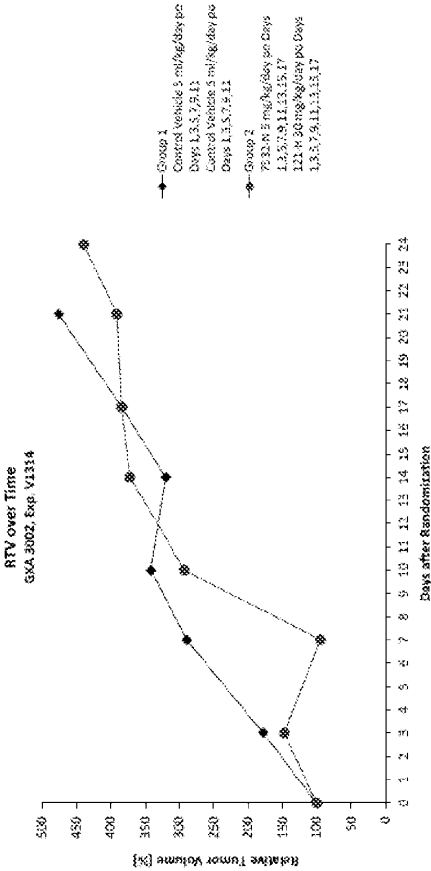


Fig. 48B

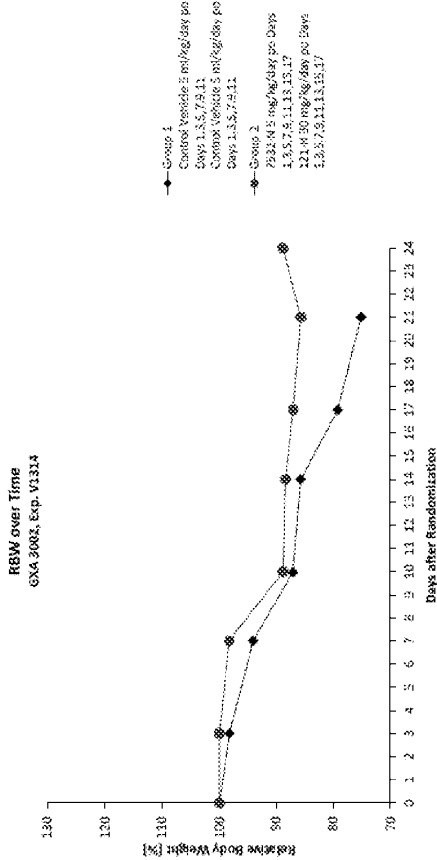


Figure 49

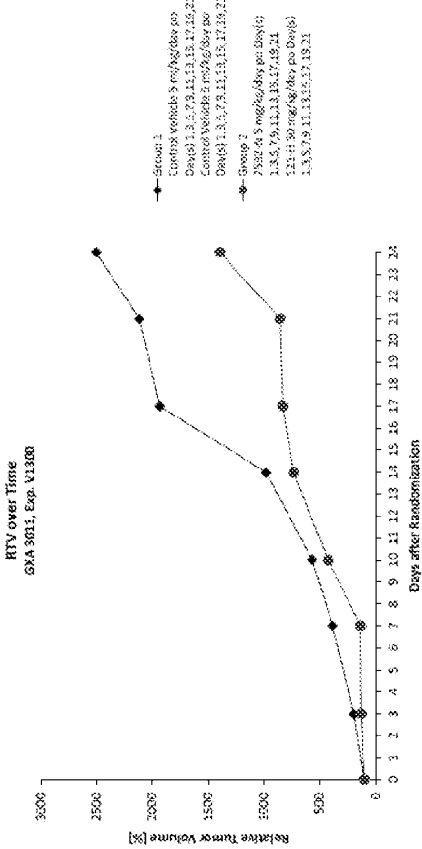


Fig. 49A

Fig. 49B

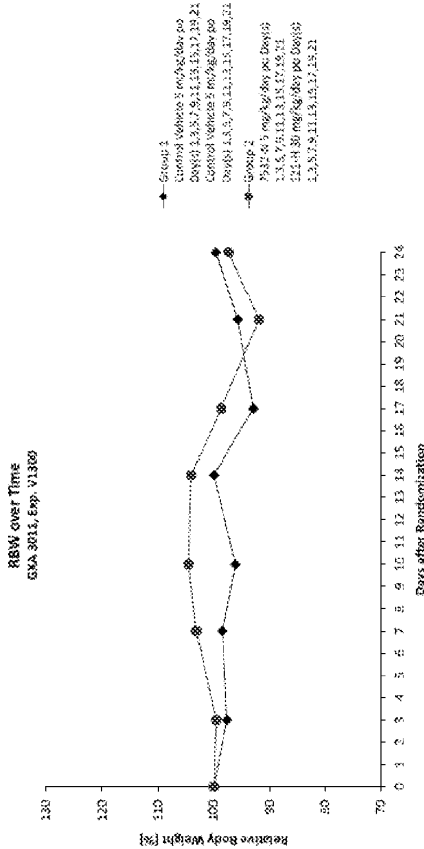


Fig. 50A

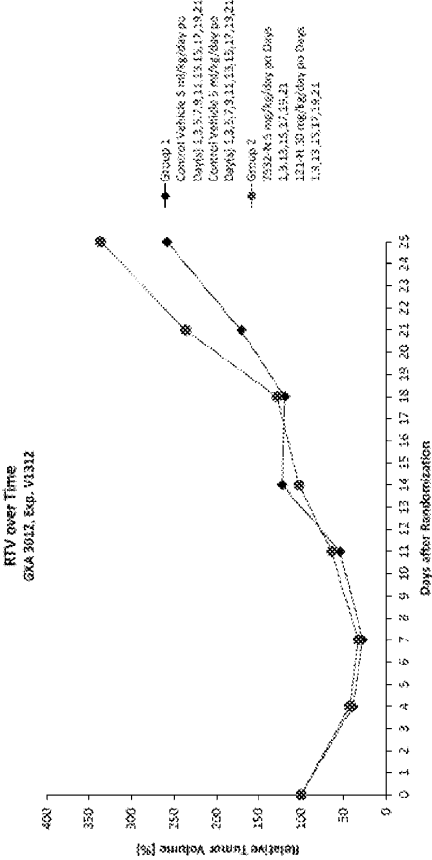


Fig. 50B

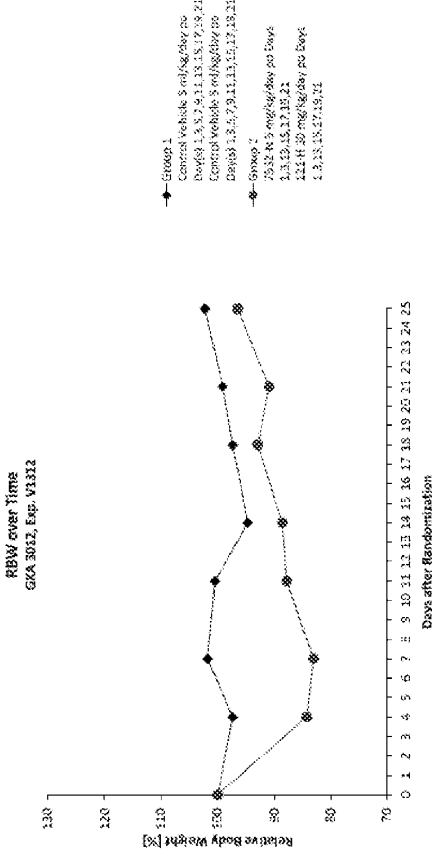


Fig. 51A

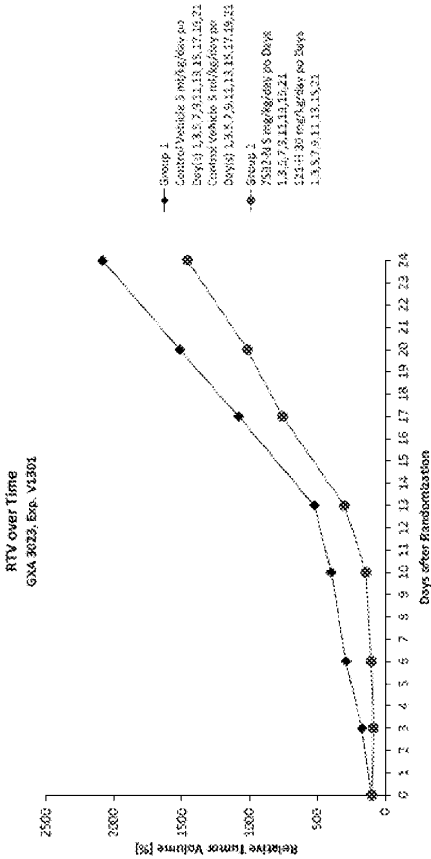


Fig. 51B

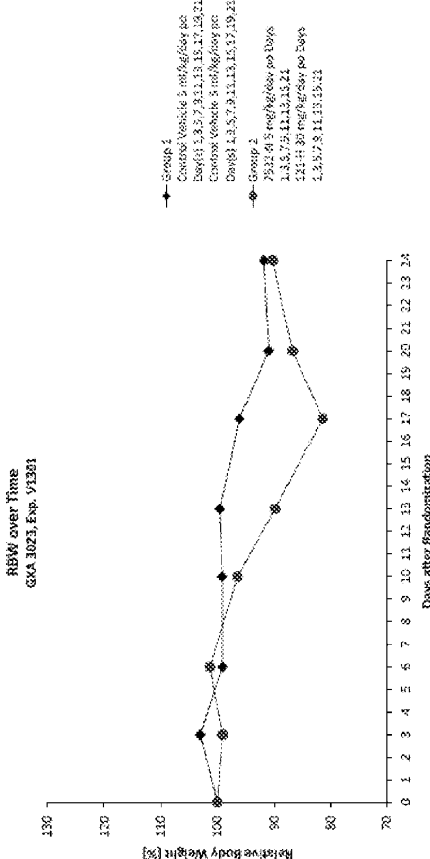


Figure 52

Fig. 52A

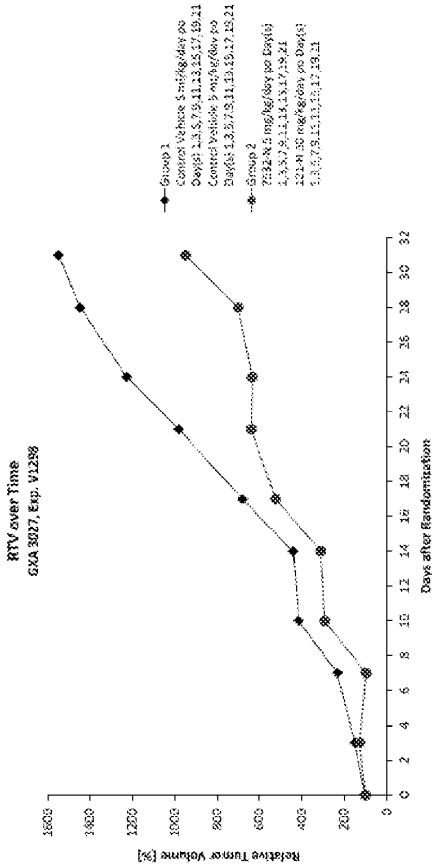


Fig. 52B

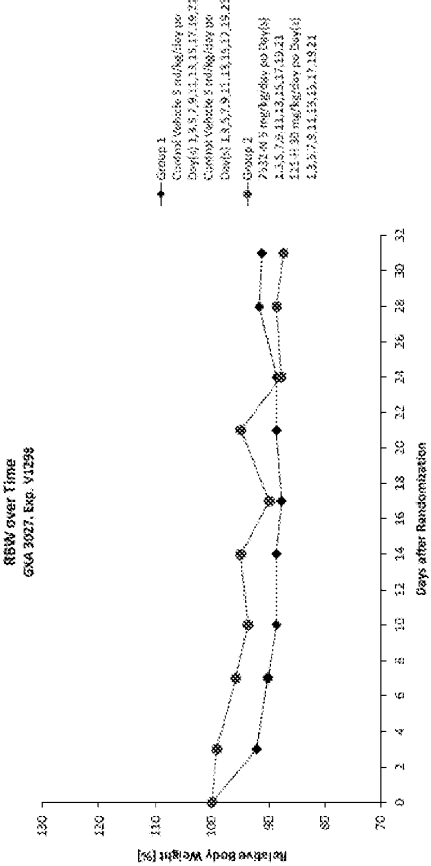


Figure 53

Fig. 53A

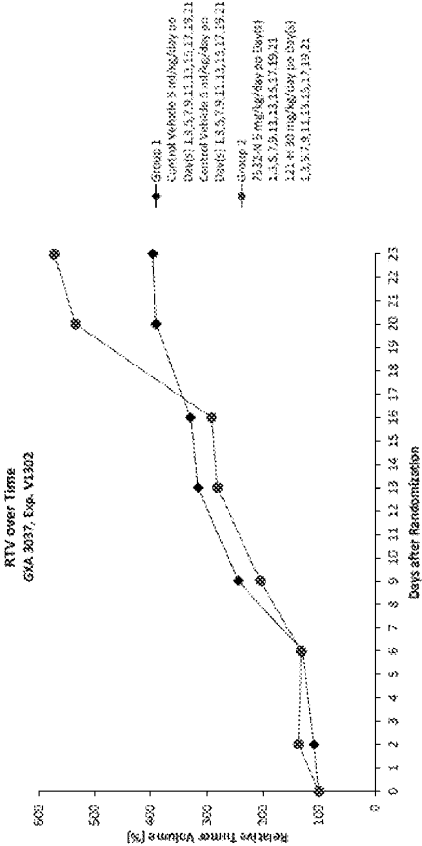


Fig. 53B

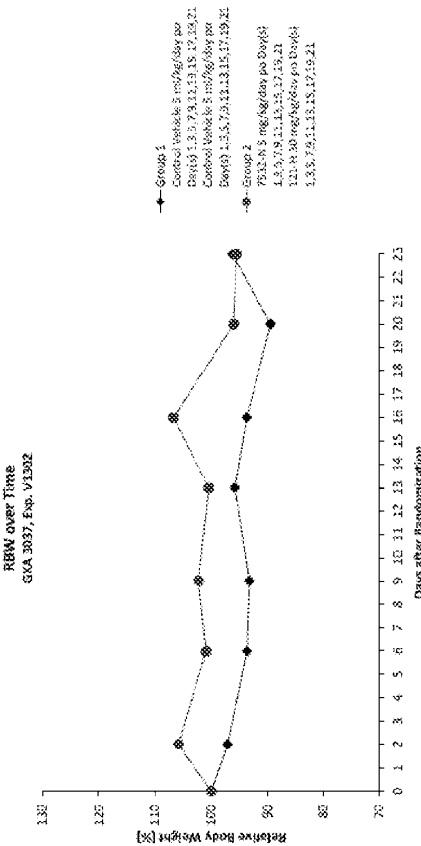


Fig. 54A

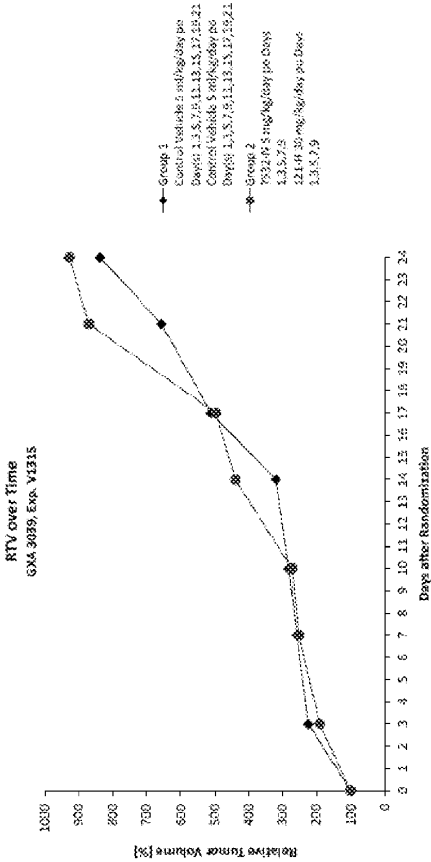


Fig. 54B

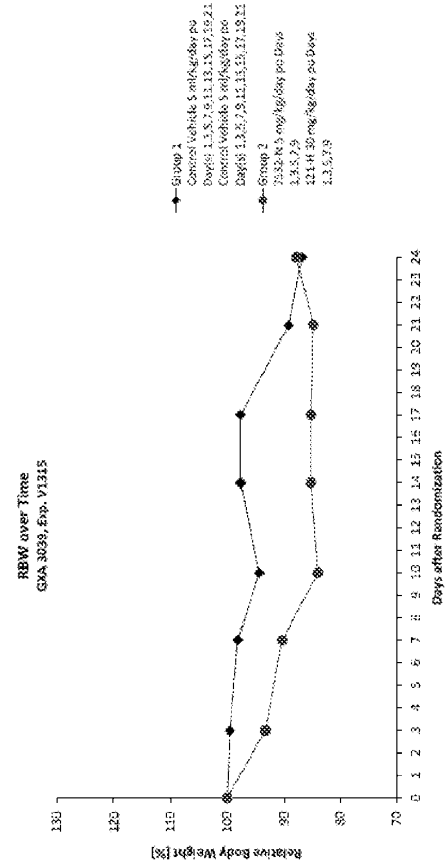


Fig. 55A

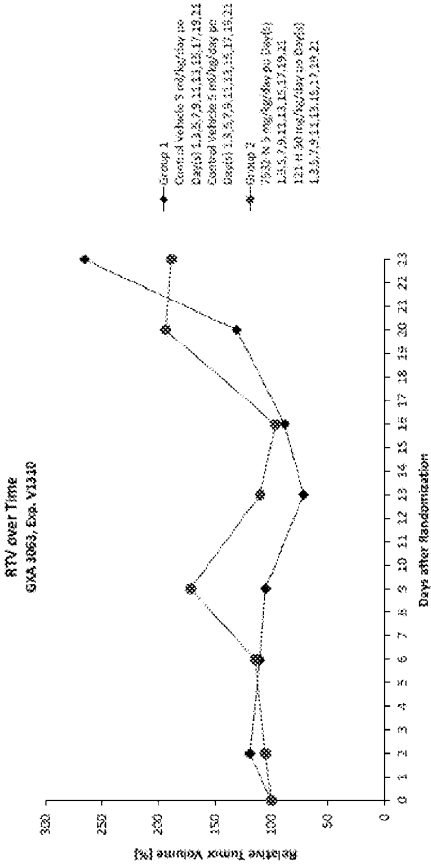


Fig. 55B

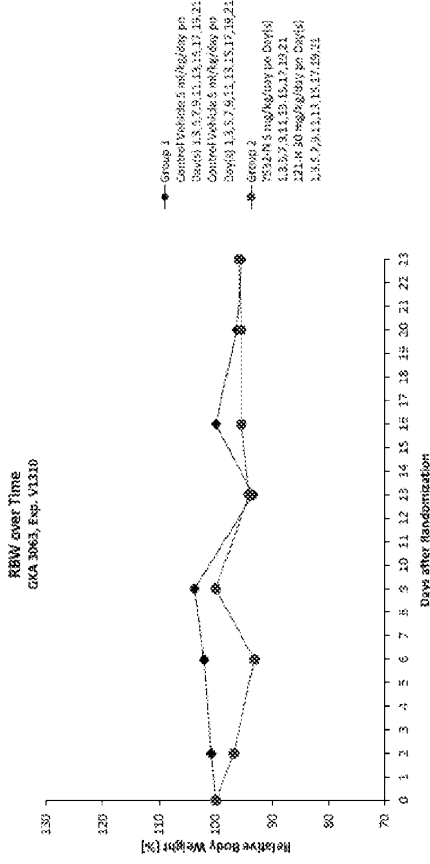


Fig. 56A

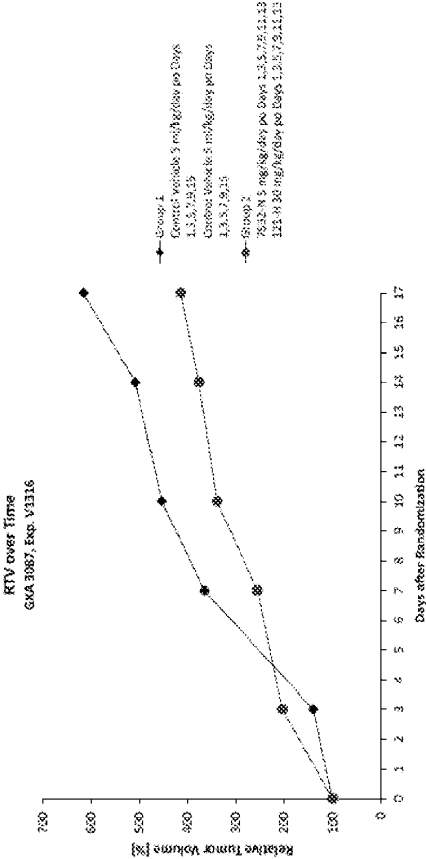


Fig. 56B

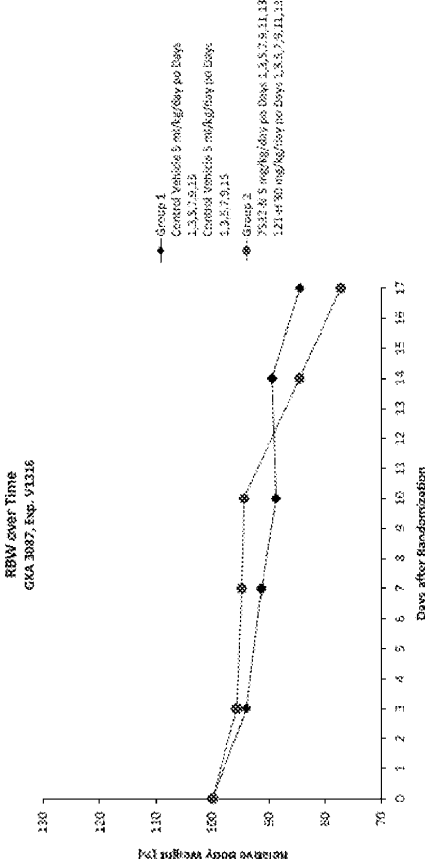


Figure 57

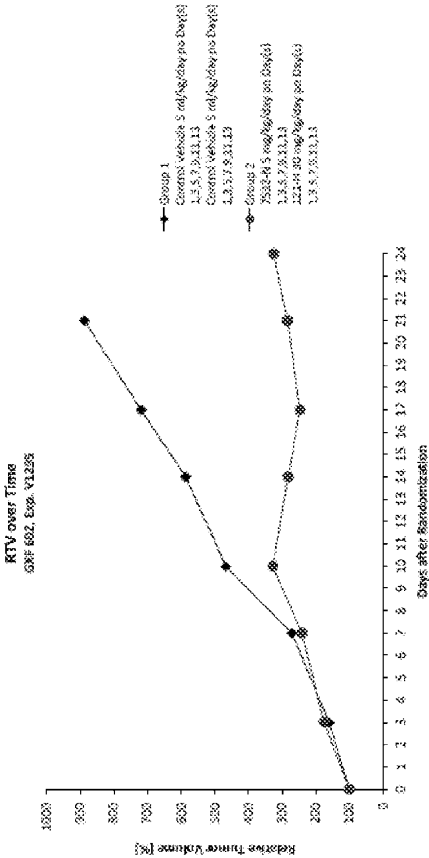


Fig. 57B

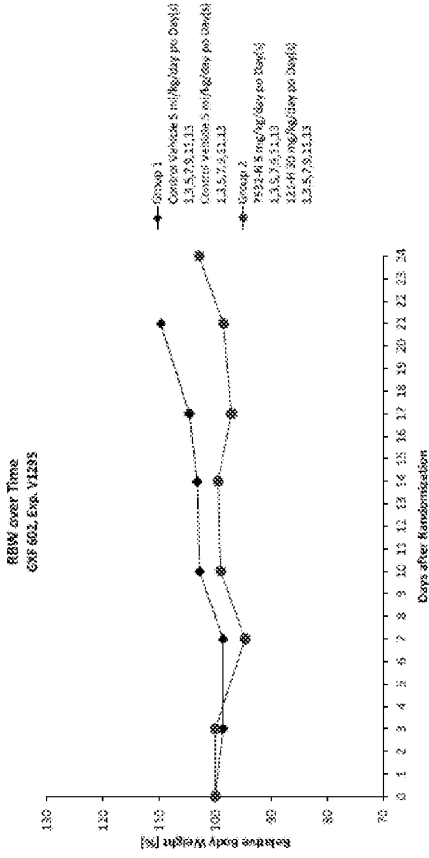


Figure 58

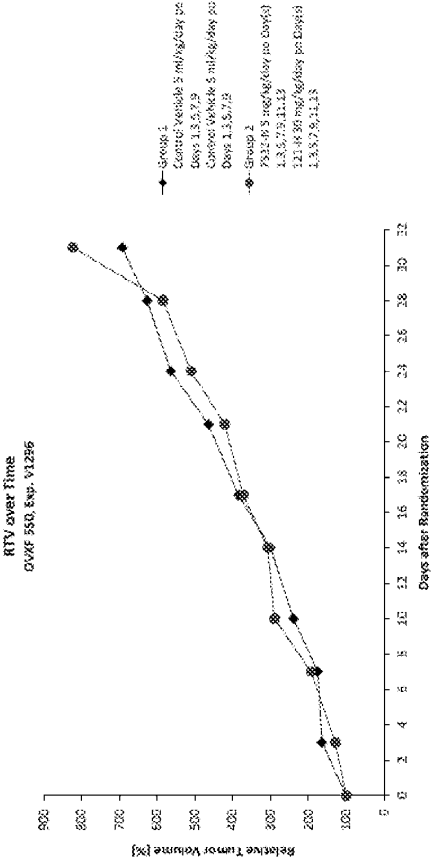


Fig. 58A

Fig. 58B

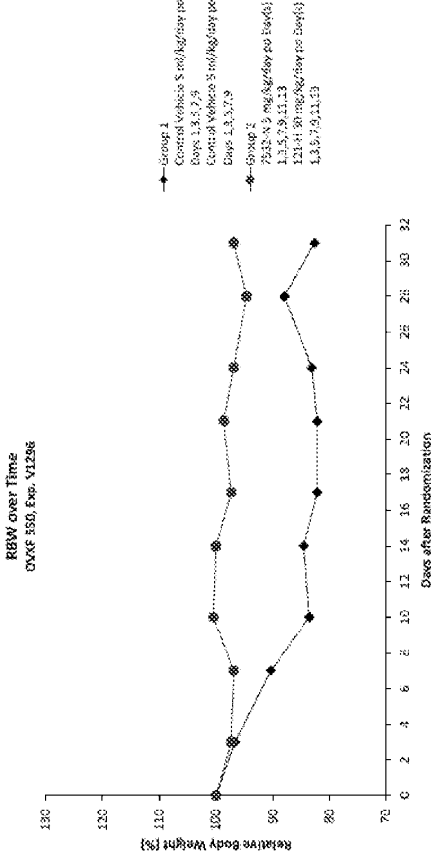


Fig. 58B

Figure 59

Fig. 59A

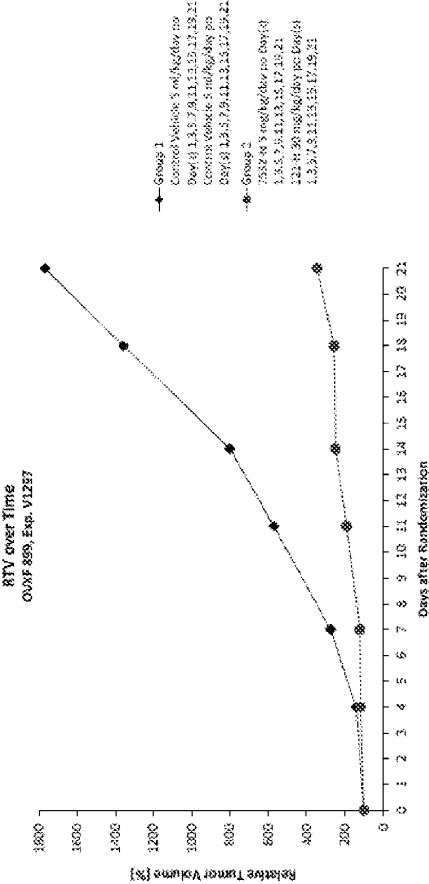


Fig. 59B

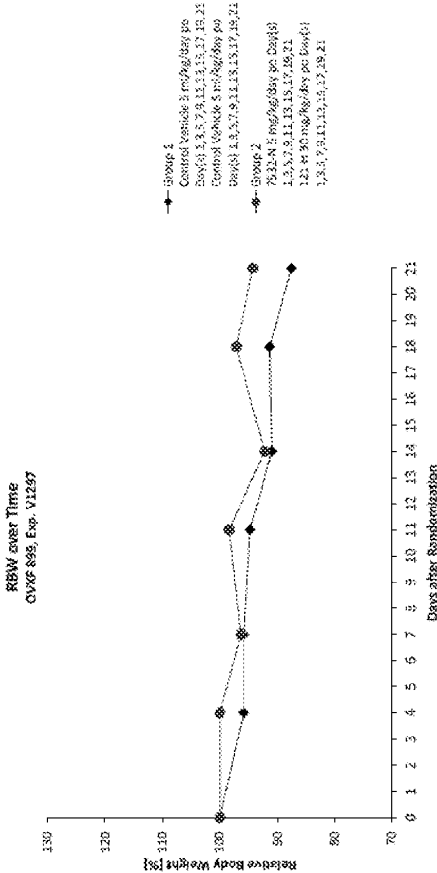


Figure 60

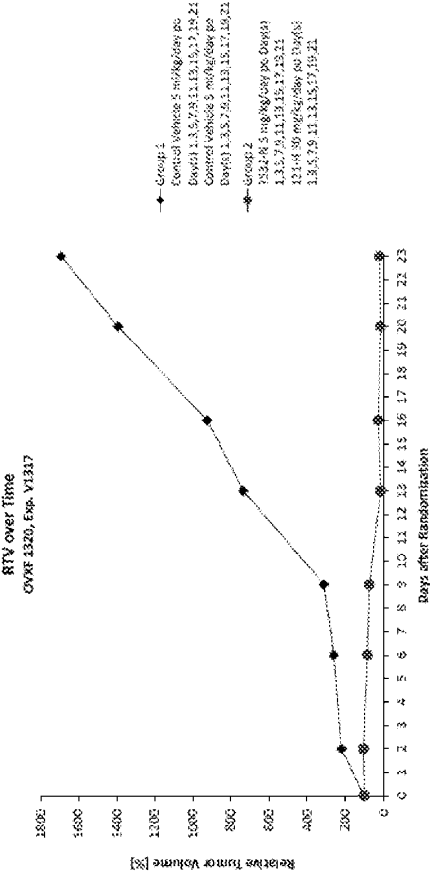


Fig. 60A

Fig. 60B

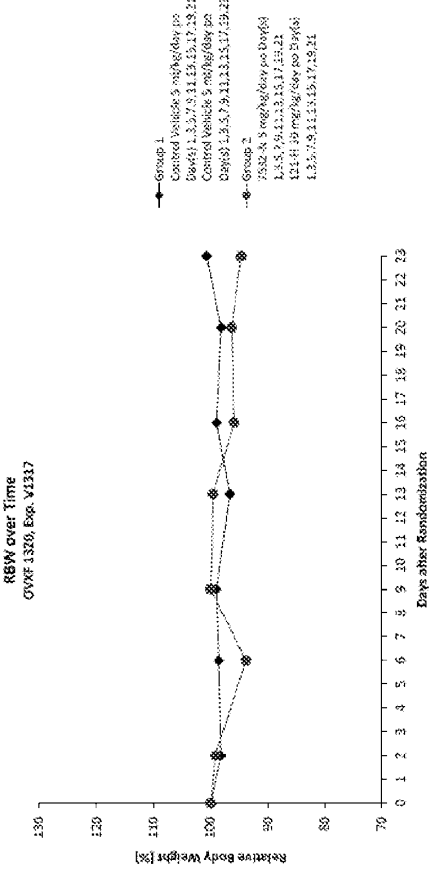


Fig. 61A

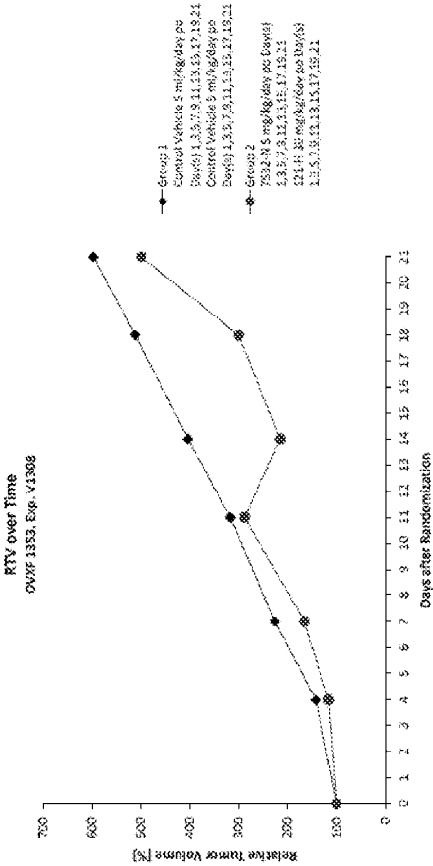


Fig. 61B

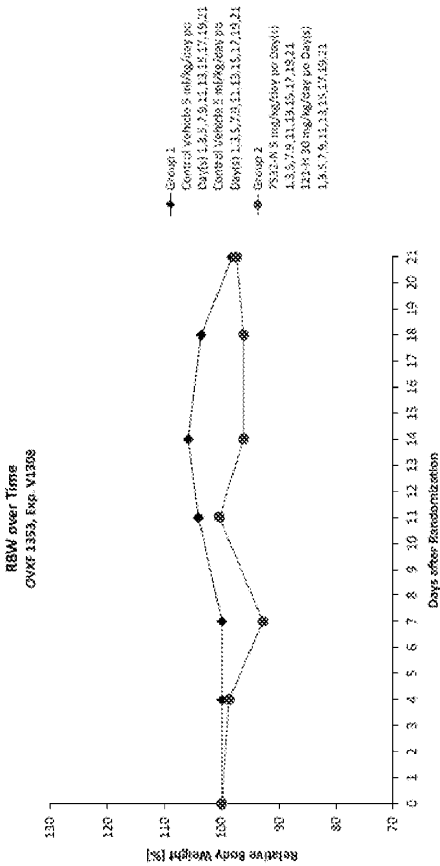


Figure 62

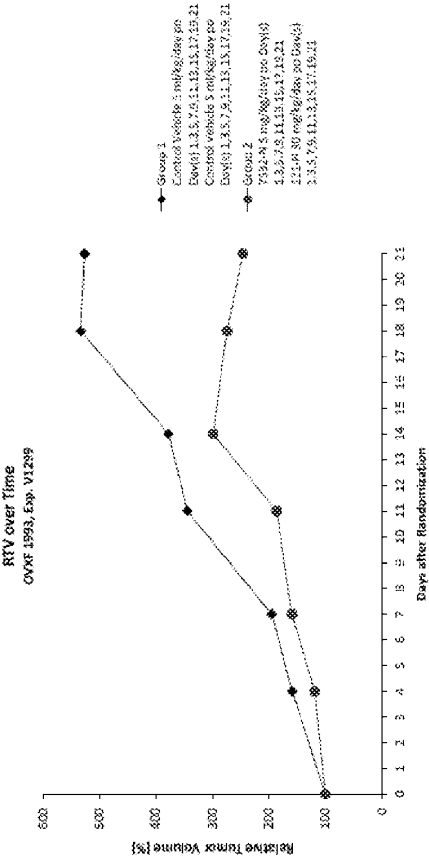


Fig. 62A

Fig. 62B

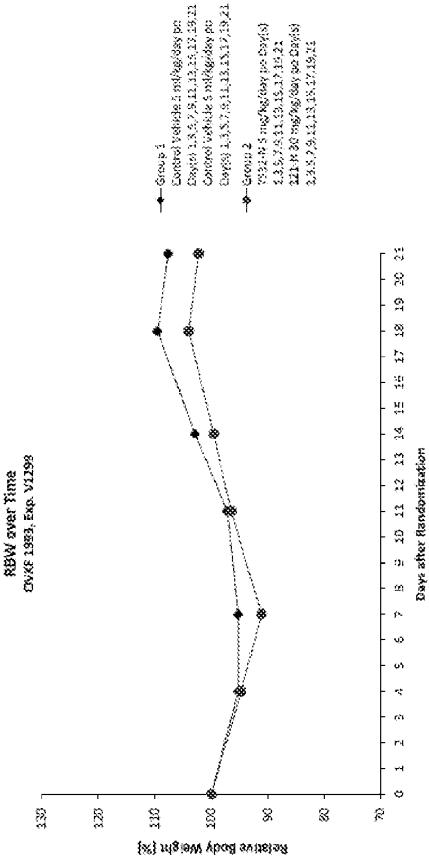


Figure 63

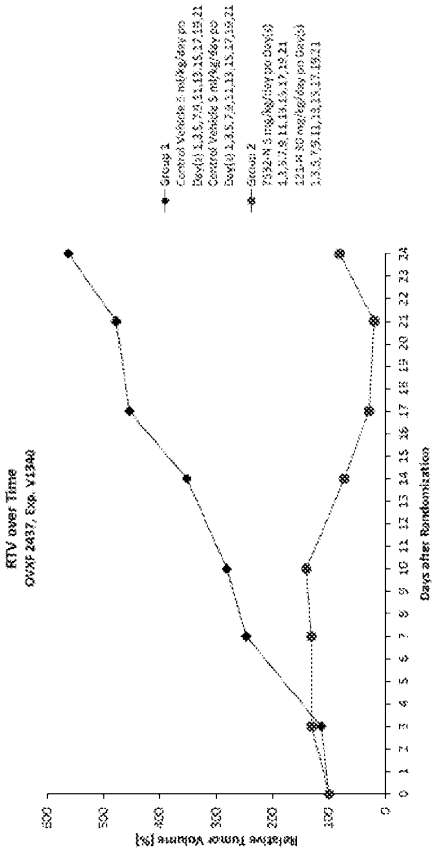


Fig. 63A

Fig. 63B

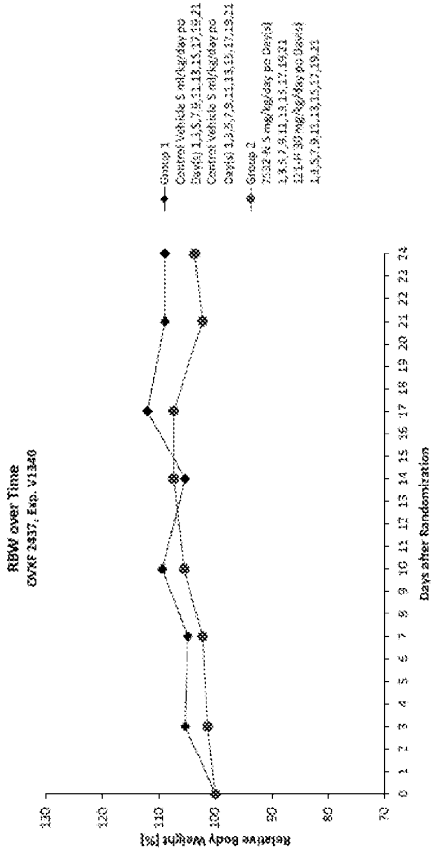


Fig. 64A

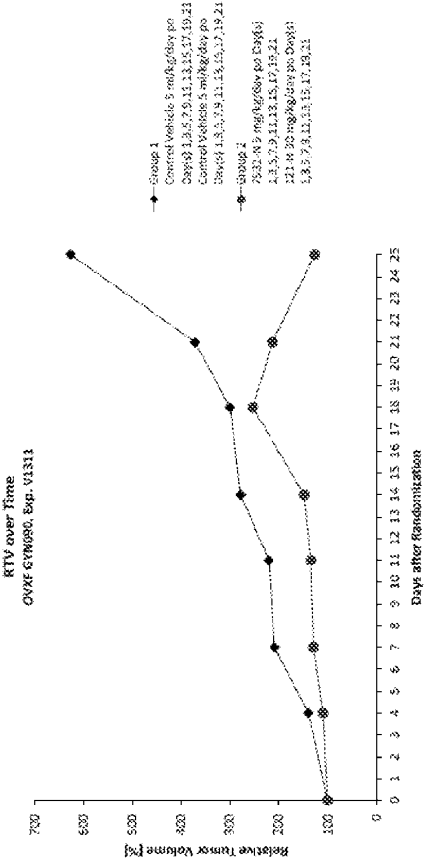


Fig. 64B

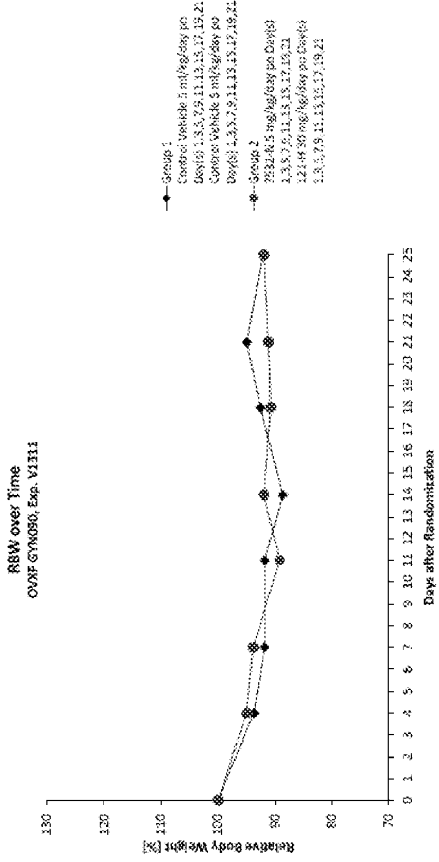


Figure 65

Fig. 65A

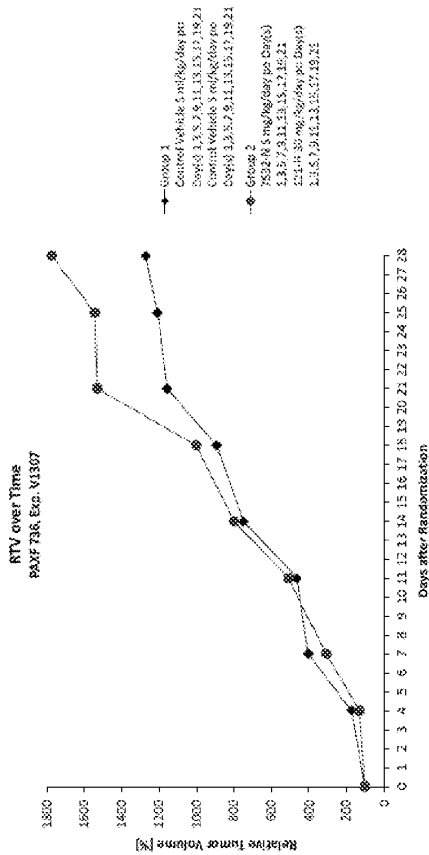


Fig. 65B

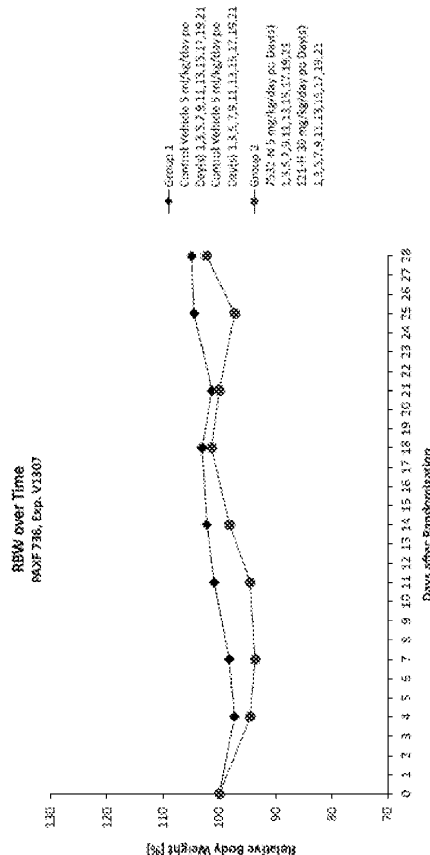


Figure 66

Fig. 66A

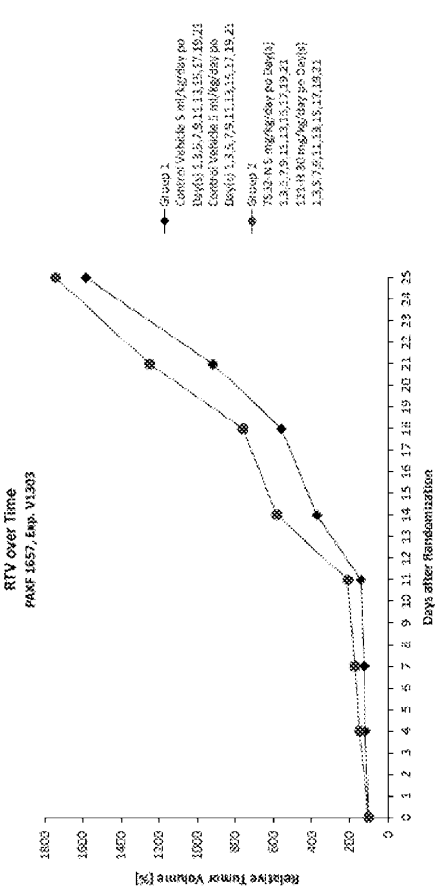


Fig. 66B

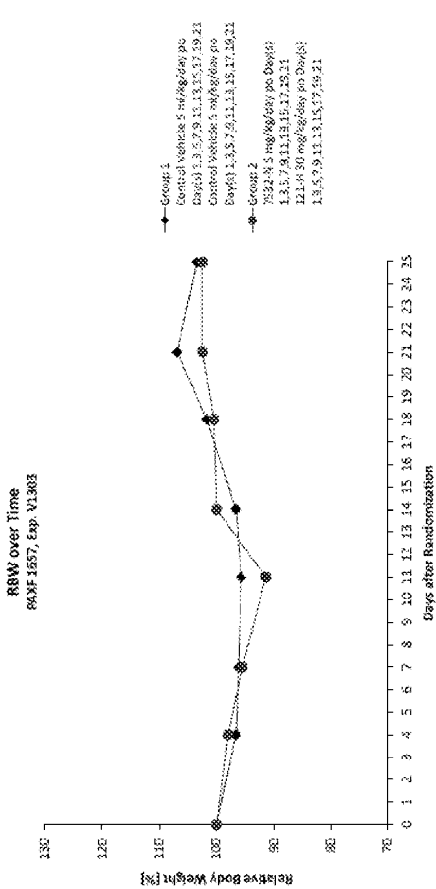


Figure 67

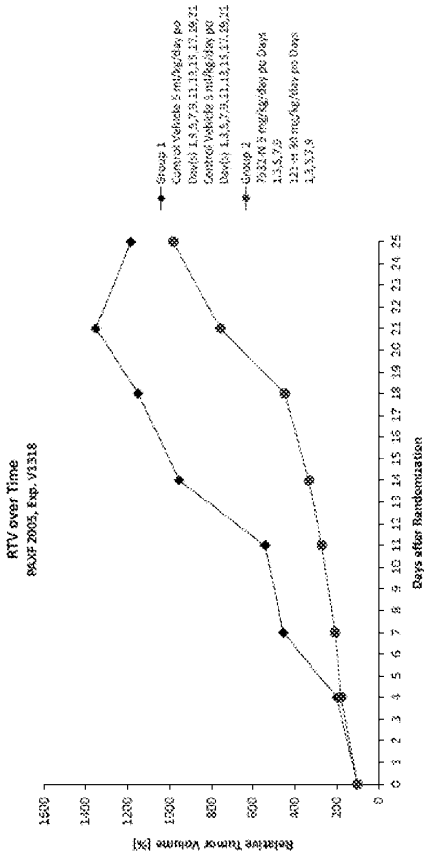


Fig. 67A

Fig. 67B

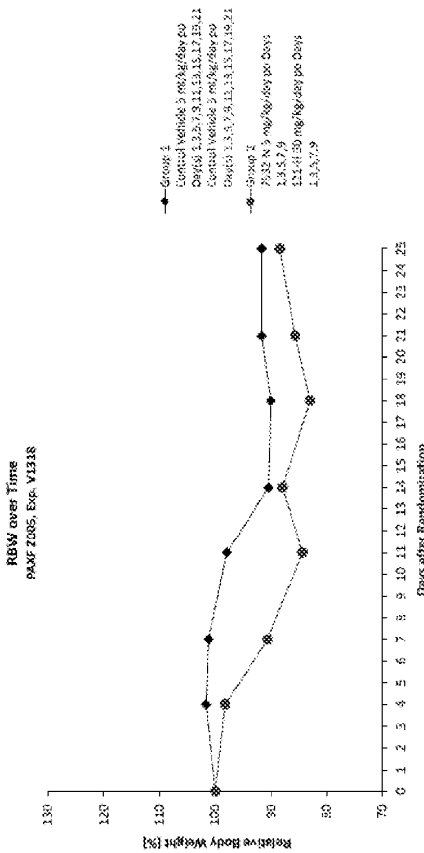


Figure 68

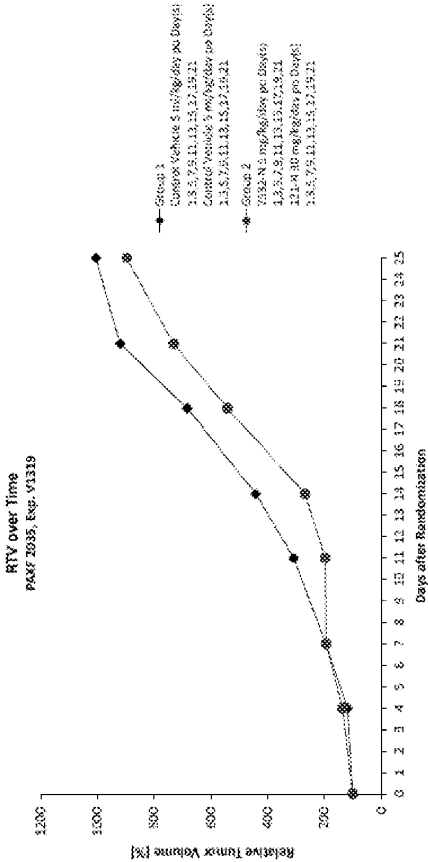


Fig. 68B

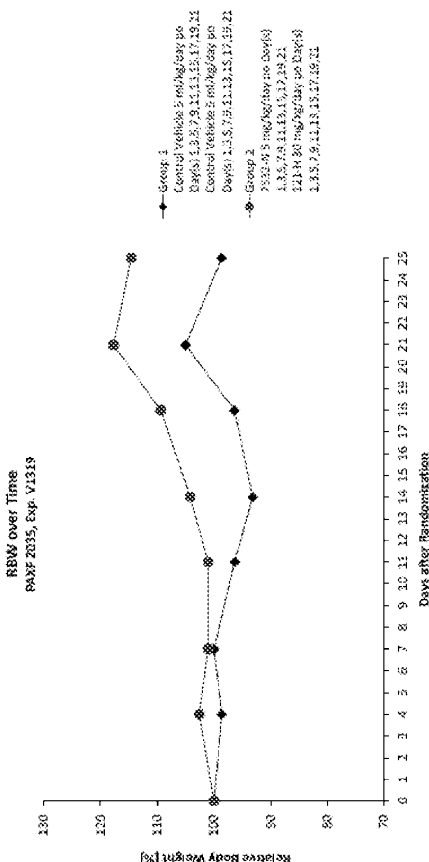


Figure 69

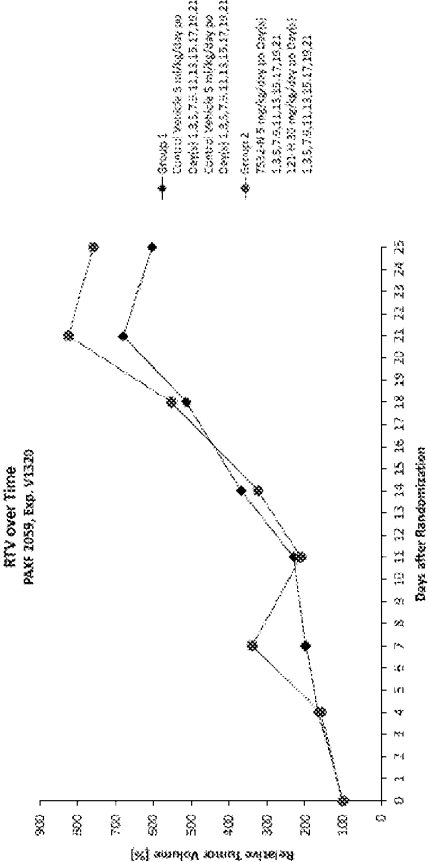


Fig. 69A

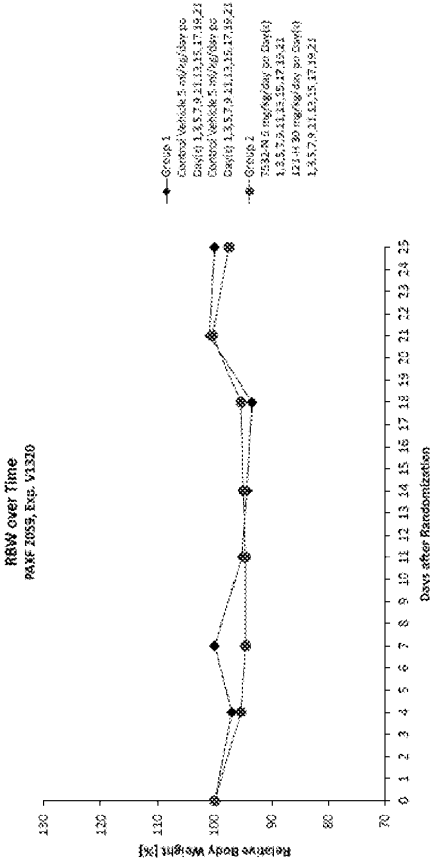


Fig. 69B

Figure 70

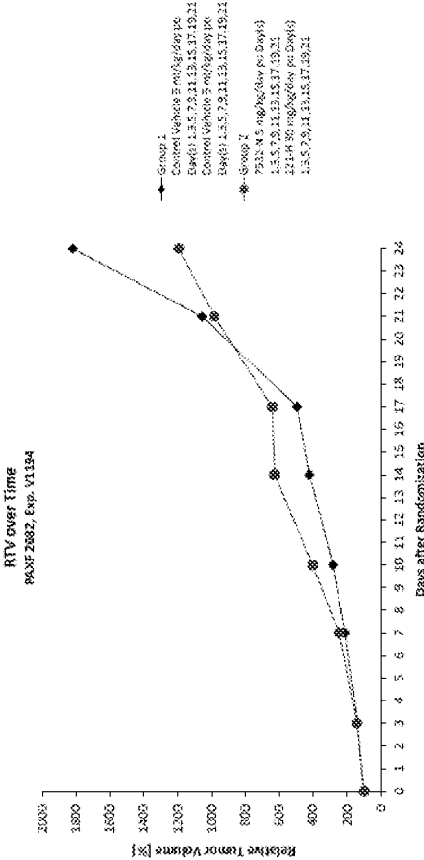


Fig. 70A

Figure 70B

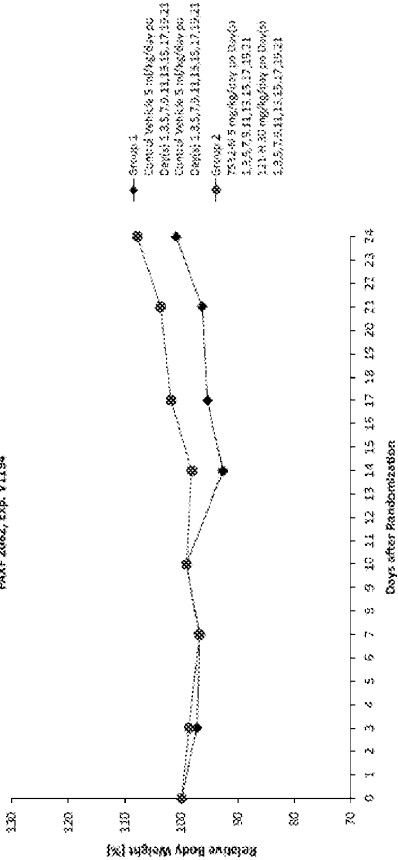


Fig. 70B

Figure 71

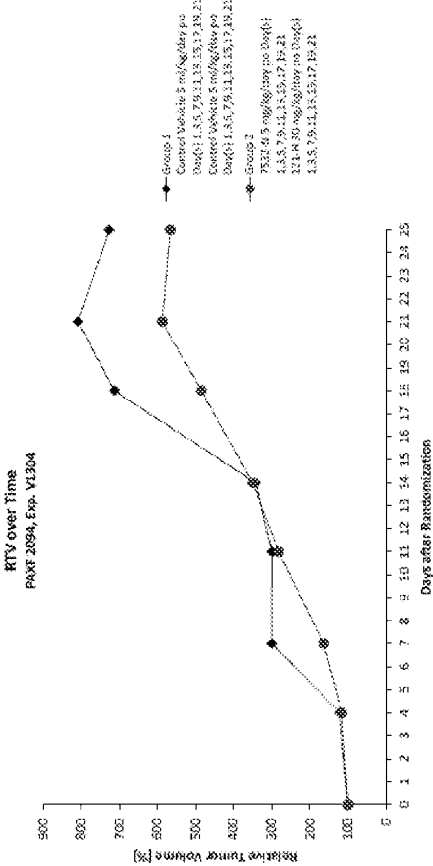


Fig. 71A

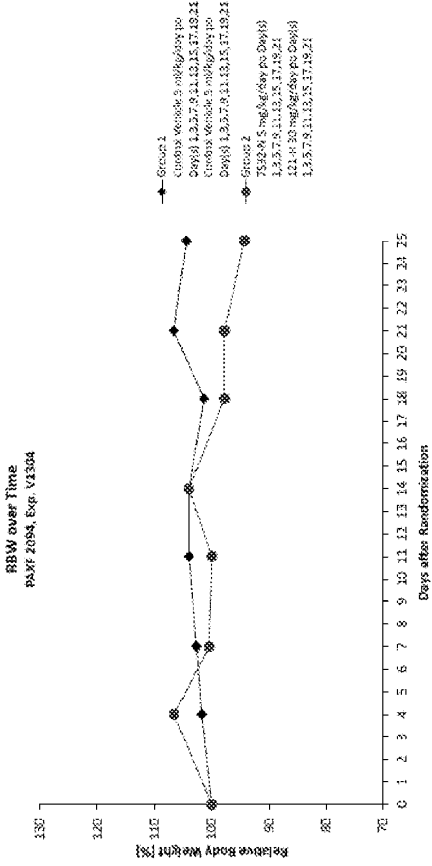


Fig. 71B

Figure 72

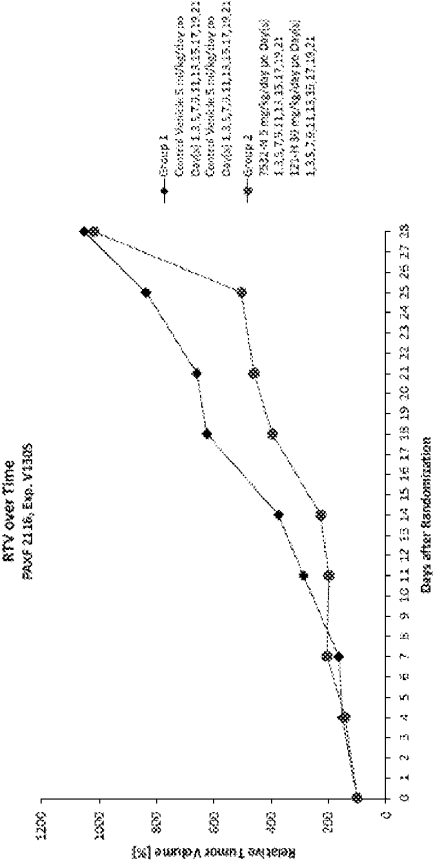


Fig. 72A

Fig. 72B

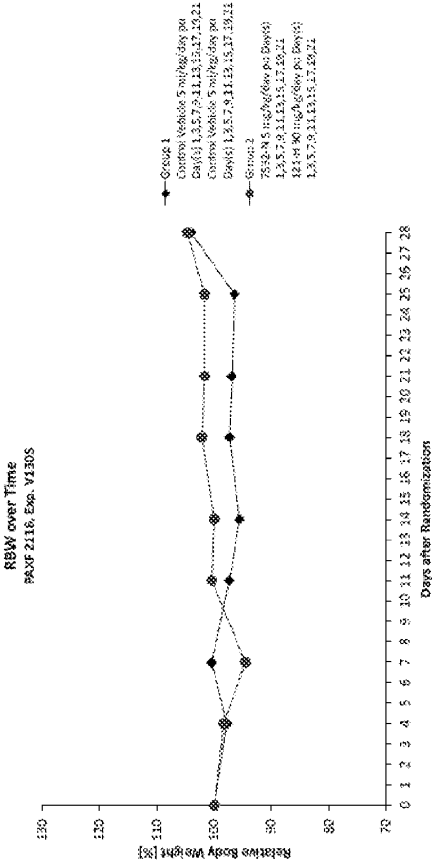


Fig. 72B

Figure 73

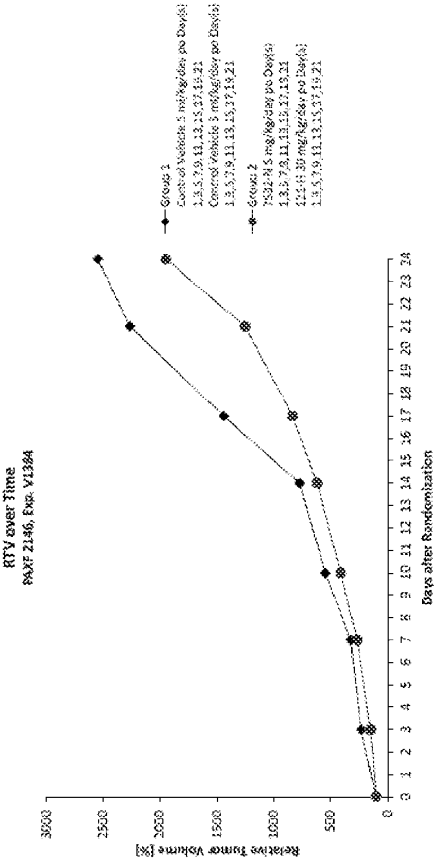


Fig. 73A

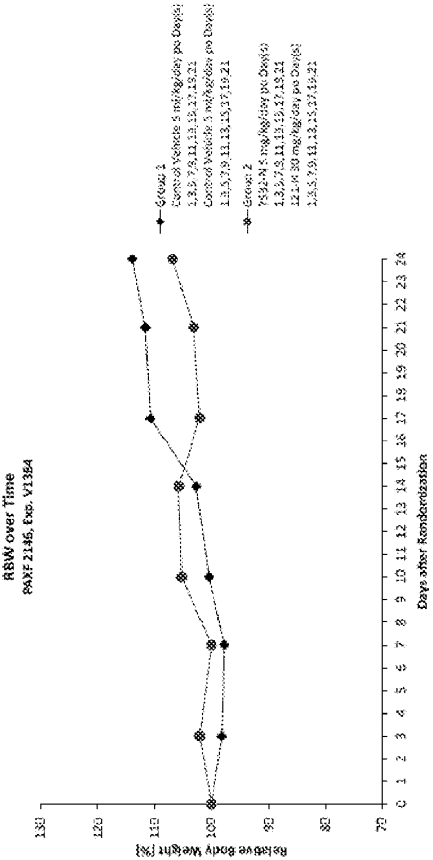


Fig. 73B

Figure 74

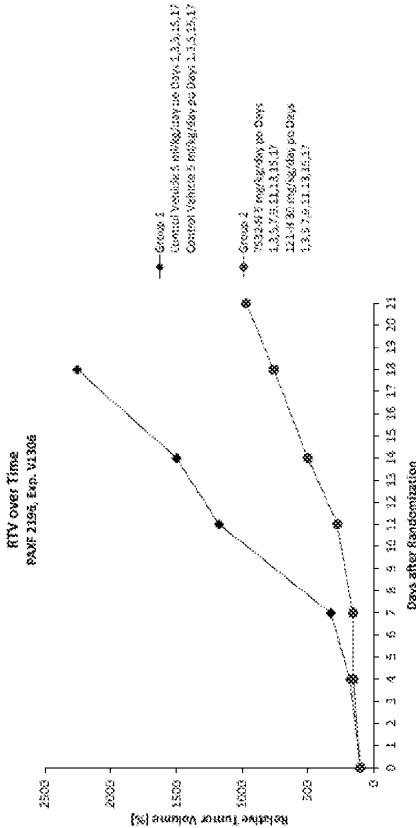


Fig. 74A

Fig. 74B

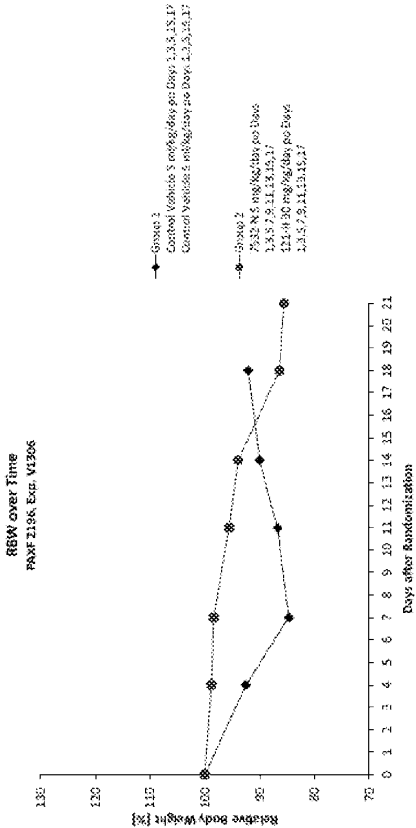


Fig. 74B

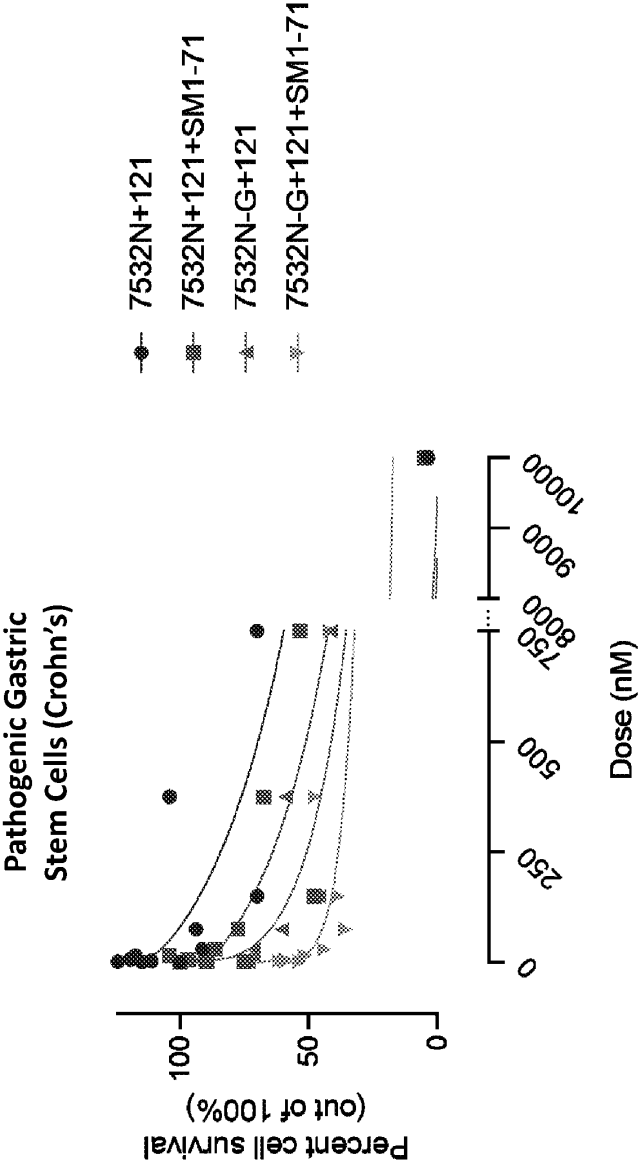


Fig. 75

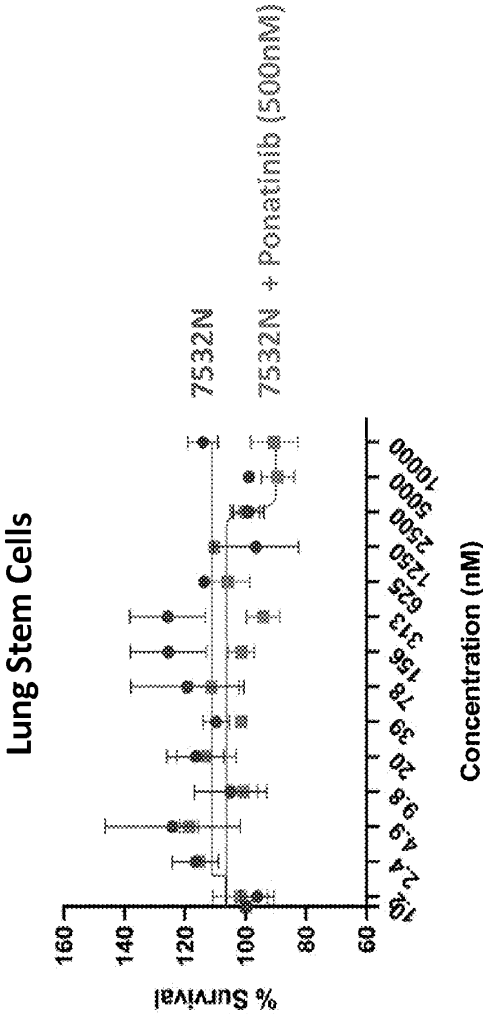


Fig. 76