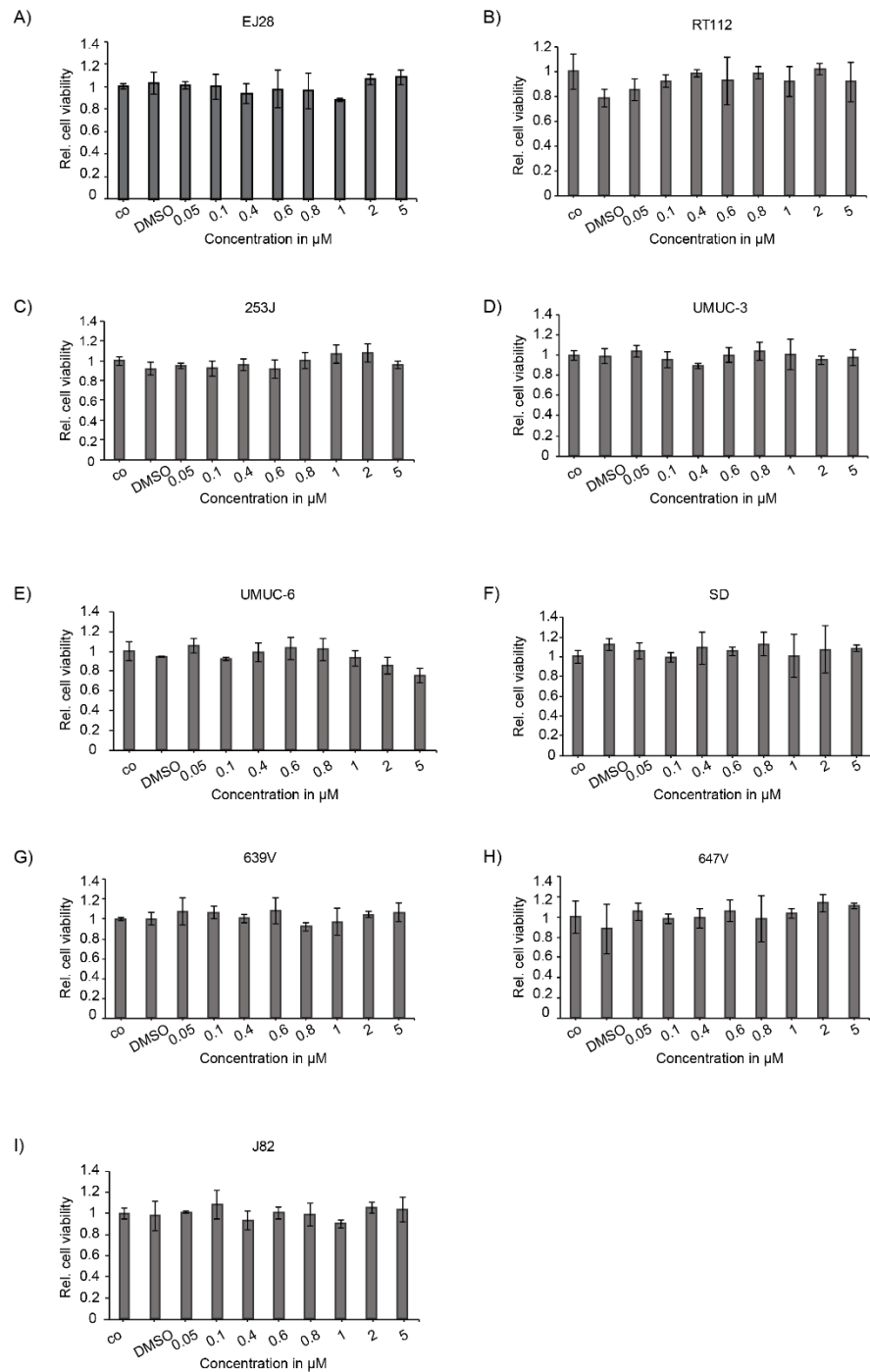
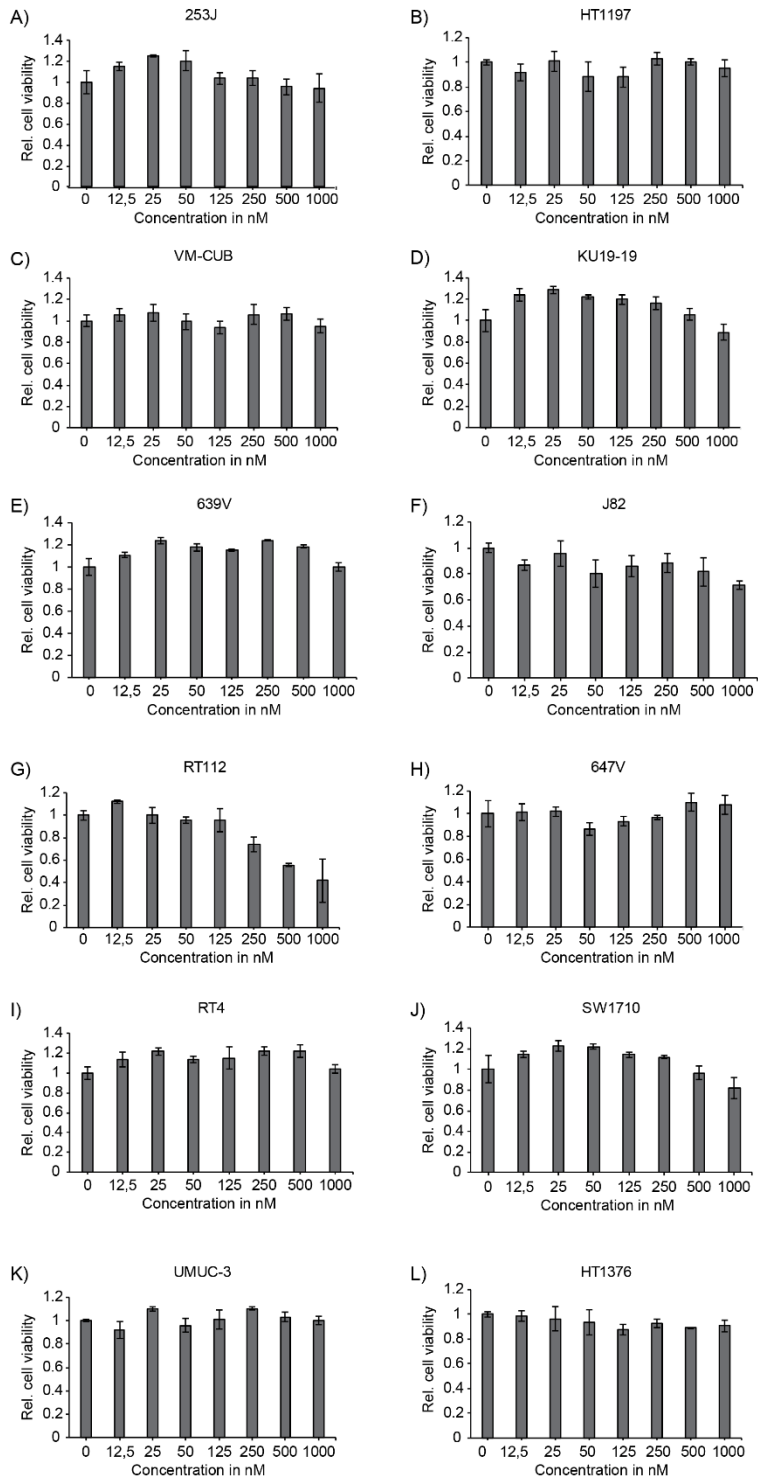


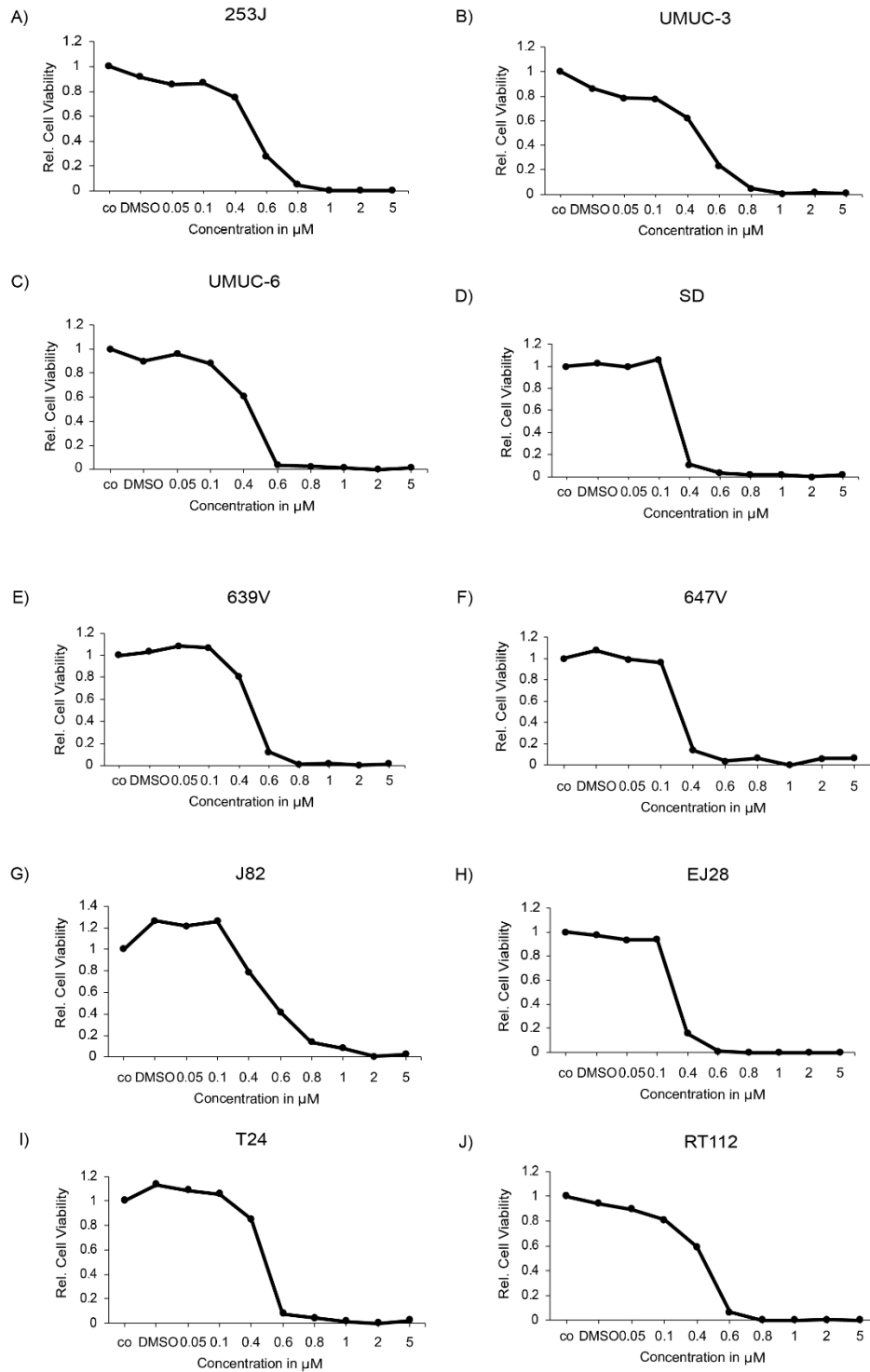
Supplementary figure-S1: JAK inhibition by specific inhibitors: Cells were treated with increasing concentrations of Ruxolitinib and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment in a panel of bladder cancer cell lines: Error bars S.E.



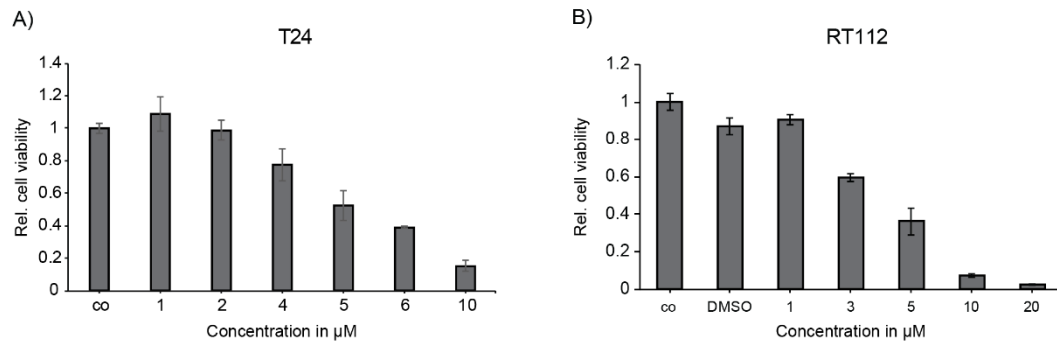
Supplementary figure-S2: JAK inhibition by specific inhibitors: Cells were treated with increasing concentrations of BSK-805 and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment in a panel of bladder cancer cell lines: Error bars S.E.



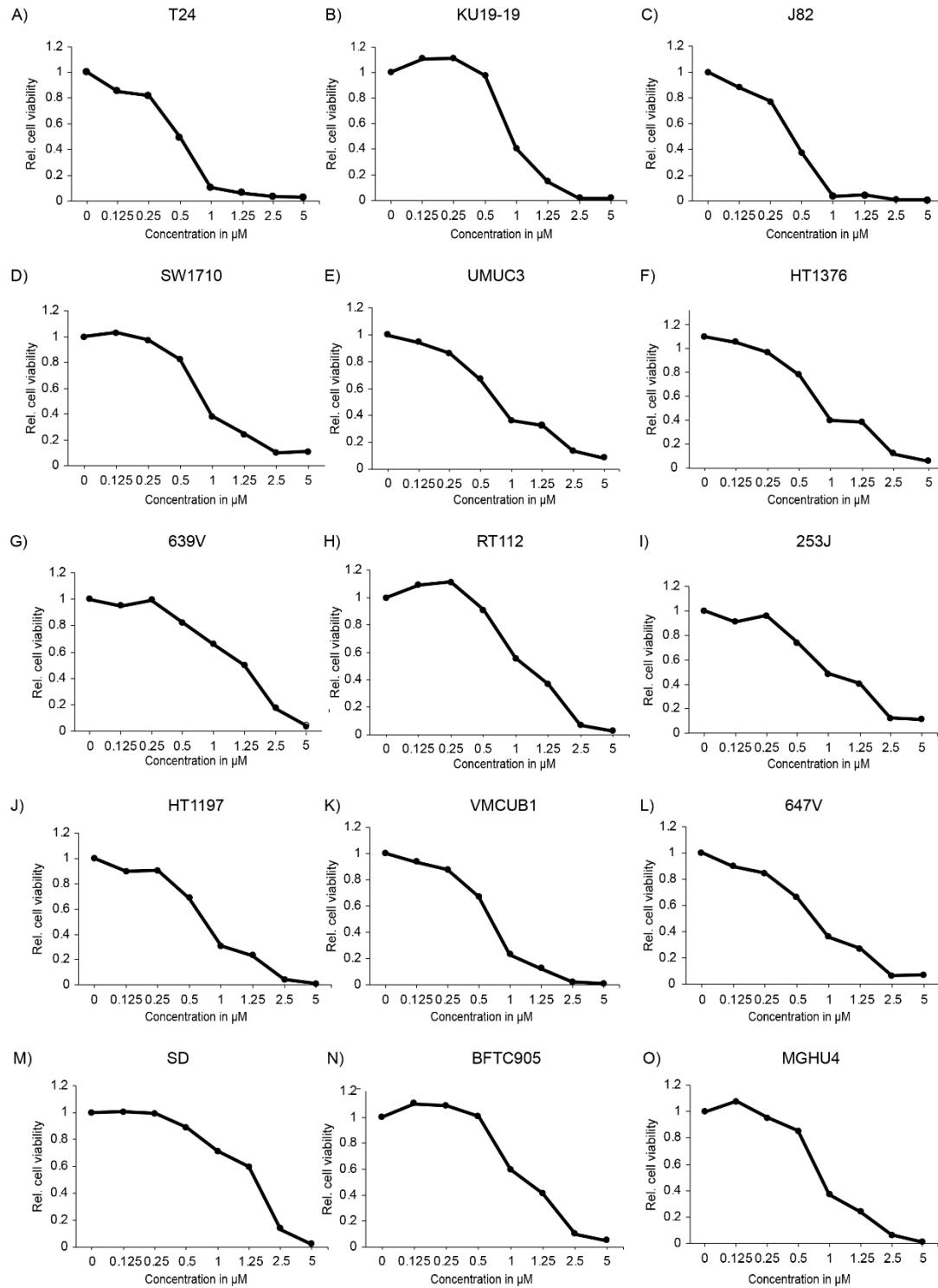
Supplementary figure-S3: STAT3/5 inhibition by specific inhibitors: Cells were treated with increasing concentrations of SH-4-54 and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment in a panel of bladder cancer cell lines: Error bars S.E.



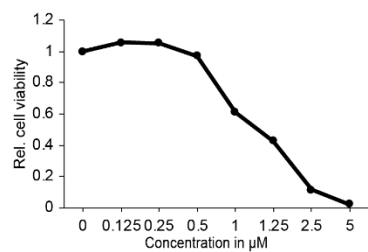
Supplementary figure-S4: STAT3/5 inhibition by specific inhibitors: Cells were treated with increasing concentrations of Nifuroxazide and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment in T24 (A) and RT112 (B) cells. Error bars S.E.



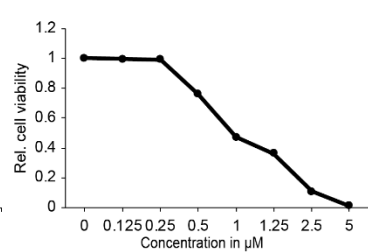
Supplementary figure-S5: STAT3/5 inhibition by specific inhibitors: Cells were treated with increasing concentrations of Stattic and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment in a panel of bladder cancer cell lines: Error bars S.E.



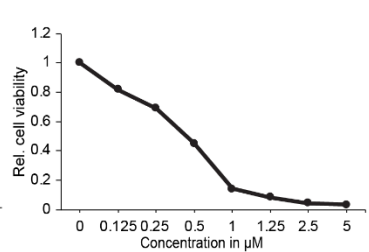
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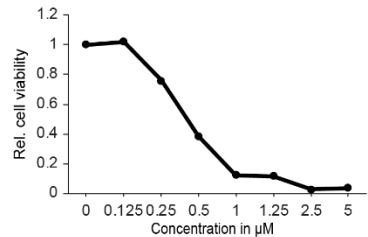
Q) UMUC6



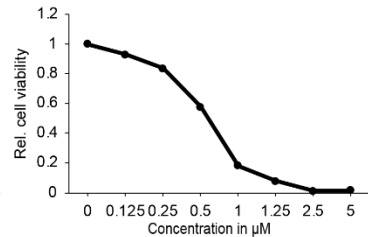
R) EJ28



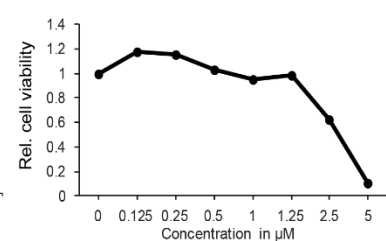
S) HCV29



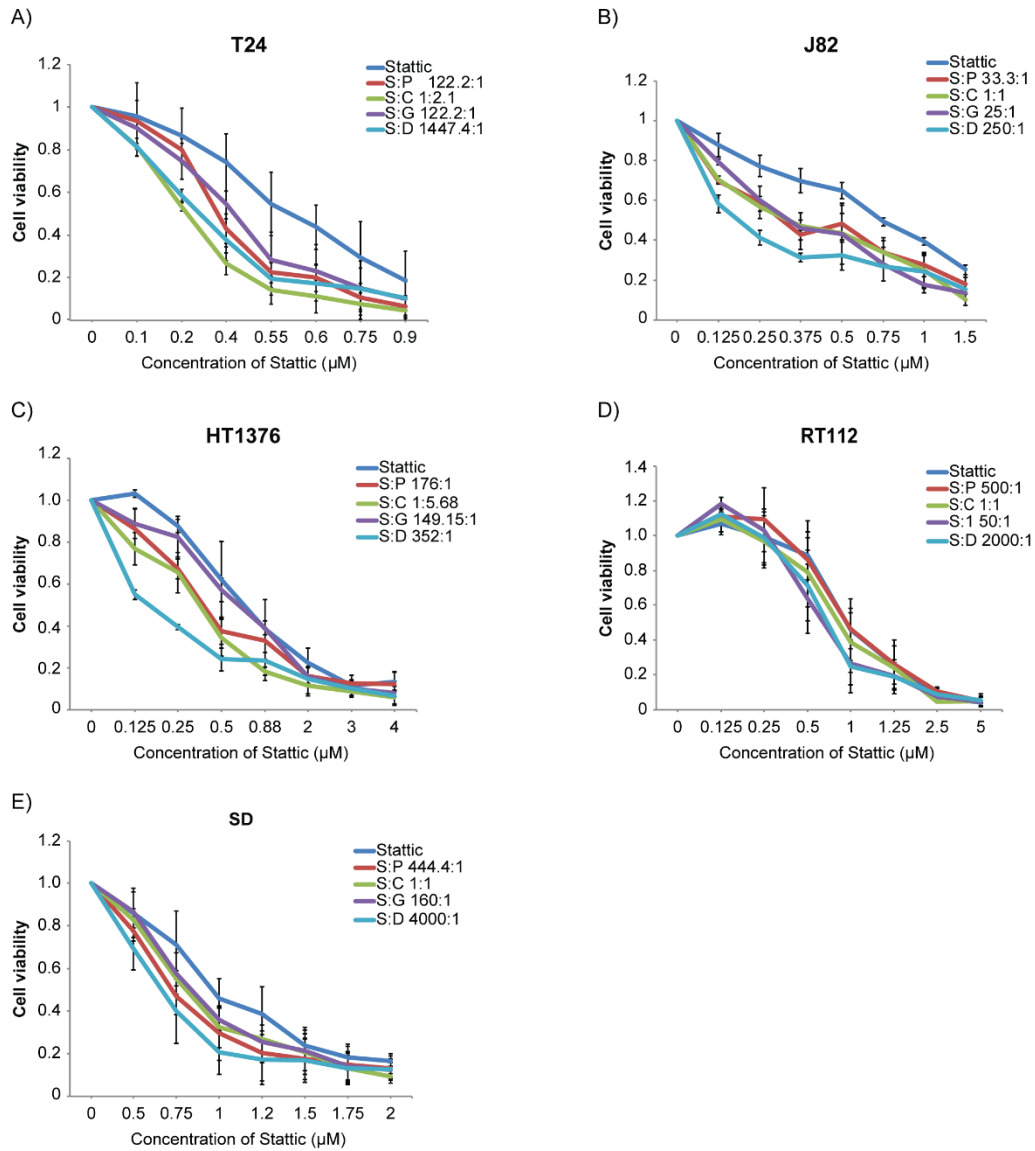
T) BTE5



U) RT4



Supplementary figure-S6: Dose response curves for combination therapy with Stattic and chemotherapeutics: Treatment of the respective cell lines was done for 72 hours with Stattic alone and in a fixed ratio combination with Paclitaxel, Cisplatin, Gemcitabine or Docetaxel in T24, J82, HT1376, RT112, and SD cell lines (See Materials and methods) and cell viability was assessed by CellTiter-Blue® Cell Viability Assay 72 hours after treatment. Error bars S.E.



Supplementary table-1: Alterations in the JAK-STAT signalling pathway related genes in bladder cancer in the TCGA dataset.

S.No	Gene symbol	Alteration in gene expression (n= 412)	
		Number of cases with alterations	%
1	JAK1	29	7
2	JAK2	54	13
3	JAK3	32	8
4	TYK2	28	7
5	STAT1	42	10
6	STAT2	21	5
7	STAT3	29	7
8	STAT4	33	8
9	STAT5a	38	9
10	STAT5b	24	6
11	STAT6	27	7

Supplementary table-2: Co-occurrence of altered genes in the JAK-STAT pathway in the TCGA dataset.

Gene A	Gene B	Neither A nor B	A Not B	B Not A	Both A and B	Log2 Odds Ratio	p-Value	Tendency
STAT3	STAT5A	289	15	22	10	>3	<0.001	Co-occurrence
JAK2	STAT5A	263	41	18	14	2.319	<0.001	Co-occurrence
STAT3	STAT5B	294	18	17	7	2.75	<0.001	Co-occurrence
STAT5A	STAT5B	287	25	17	7	2.241	0.004	Co-occurrence
JAK2	STAT3	265	46	16	9	1.696	0.011	Co-occurrence
JAK1	STAT3	289	22	19	6	2.053	0.011	Co-occurrence