Supplementary Information S2 (Table) | **Effects of PTIs in intact cells**

Compound	Model	Molecular targets and effects	Phenotype	Refs.
FTIs				
α–OH-farnesyl phosphonic acid	*HRAS*-transformed NIH 3T3 cells	HRAS-F↓	n/d	1
HR-12	*HRAS*-transformed Rat1 cells	$p27^{Kip1}$↑, CDK2↓, p-RB↓	G1 arrest, anchorage-dependent and -independent growth↓	2
BMS-186511	ST88-14 cells	HRAS-F↓	Anchorage-independent growth↓	3
FTI-277	*Ras*-transformed NIH 3T3 cells	HRAS-F↓, MAPK activation↓	n/d	4
		HRAS-F↓, MAPK signalling↓	n/d	5
		HRAS-F↓, NRAS-F↓, but no effect on KRAS-F	n/d	6
	COS-7 cells transfected with AKT2	AKT2 activity↓	Apoptosis	7
	Human ovarian and pancreatic cancer cells overexpressing AKT2			
	HEK293T cells	RHEB-F↓, p-S6	d	8
	Murine *Pten*-deficient lymphoma cells	RHEB-F↓	ll death	9
FTI-2153	*HRAS*-transformed NIH 3T3 cells	HRAS-F↓, IC50	d	10
	Human cancer cells	n/d	nchorage-independent growth↓	
	A549, CaLu-1	CENP-E interaction w/microtubules↓	Prometaphase arrest	11
	HFF and NIH 3T3 cells	unknown	Very little effect on cell proliferation	12
	A549, CaLu-1, OVCAR3		Prometaphase arrest	
	Human cancer cells	n/d	Cell proliferation↓ independent of RAS mutation	13
L-744,832	MDA-MB-468 cells	MAPK activation↓	Cell proliferation↓	
	HeLa cells	No effect on MAPK activation	No effect on cell proliferation	
	Human cancer cells	$p21^{Cip1}$↑, CDK↓, p-RB↓	G1 arrest	14
	Rat-1 cells	RHOB-F↓, RHOB-GG↑	Cell proliferation↓	15
Lonafarnib	DLD1, A549 cells	CENPE, CENPF interaction with microtubules	G2/M arrest	16
	HeLa cells	CENP-F-F↓ and degradation↓	G2/M arrest	17

should read" CENPE"

should read: "CENPF-F ↓ "

	Human HNSCC and NSCLC cells	p-AKT↑, survivin↑	Apoptosis induction requires inhibition of IGFR-AKT signalling	18
	Human NSCLC cells low in p-AKT	PARP cleavage↑	G1 or G2/M arrest, apoptosis	19
	Human NSCLC and HNSCC cells	VEGF↓, HIF-1α↓	Angiogenesis↓	20
	Panc-1 and U2OS cells	p-mTOR↓, p-S6K↓	Autophagic cell death	21
	Human NSCLC cells overexpressing RHEB	RHEB-F↓, p-S6K↓, p-S6↓	Cell proliferation↓, Apoptosis	22
BMS-214662	Human cancer cells	HRAS membrane association↓	Apoptosis	23
	B cells from CLL patients	Caspases 9 and 3↑, MCL1↓	Apoptosis	24
Tipifarnib	NIH 3T3 cells	n/d	No effect on cell proliferation	25
	Hras-transformed NIH 3T3 cells	HRAS-F↓, NRAS-F↓, laminA-F↓	Cell proliferation↓, IC50=1.7nM	
	Human NSCLC cells overexpressing RHEB	RHEB-F↓, p-S6K↓, p-S6↓	Cell proliferation↓, Apoptosis	22
LB42722	*Ras*-transformed C3H 10T½ cells	VEGF↓, FAS↑	FAS-induced apoptosis	26
LB42708	HUVECS	p-MAPK↓, p-AKT↓	Angiogenesis↓	27
GGTIs				
GGTI-298	Human cancer cells	$p21^{Cip1}$↑, CDK2/4↓, p-RB↓	G1 arrest	28
	Human cancer cells	RAP1A-GG↓, IC50=3μM HRAS-F↓, IC50>20μM	G1 arrest	29
	Human cancer cells	RHOA-GG↓, CDK2 and 4 activities↓, p-RB↓	n/d	30
	Human NSCLC cells	DR4 and DR5↑, c-FLIP↓	TRAIL-induced apoptosis	31
GGTI-2166	*Hras*-transformed NIH 3T3 cells	RAP1A-GG↓, IC50=0.3μM	n/d	10
	Human ovarian cancer cells	p-AKT↓, survivin↓	Apoptosis	32
GGTI-2417	MiaPaCa2 cells	RALB	Apoptosis, anchorage-dependent growth↓	33
		RALA	Anchorage-independent growth↓	
	Human breast cancer cells	RAP1-GG↓, IC50=0.4μM, p27↑ HRAS-F↓, IC50>50μM	Apoptosis	34
GGTI-DU40	MDA-MB-231 cells	RAP1A-GG↓, RHO-GG↓	Thrombin-induced cell rounding↓	35
P61-A6	K562 cells	RHOA-GG↓, $p21^{Cip1}$↑	G1 arrest, cell proliferation↓, IC50=2.2 μM	36

Combinations with FTIs				
FTI-277 + radiation	*Hras*-transformed REF cells	HRAS-F↓	Sensitisation	37
	Cells expressing activated HRAS or KRAS	HRAS-F↓, KRAS↓	Sensitisation	38
FTI-277 + GGTI-298	*Ras*-transformed NIH 3T3 cells	KRAS-F↓ and KRAS-GG↓	n/d	6
FTI-277 or Lonafarnib + taxane	PTX10 cells	Microtubule-bound paclitaxel↑	M-phase arrest. Synergy	39
L-744,832 + taxane	MCF-7 and MDA-MB-468 cells	n/d	Cell proliferation↓, apoptosis. Synergy	40
L-744,832 + cisplatin	HeLa cells	HRAS↓	Cell proliferation↓, apoptosis. Synergy	41
L-744,832 + CDK inhibitors	MCF-7 cells	p53↑	G1 arrest and apoptosis. Synergy	42
Lonafarnib + taxane	Human cancer cells	n/d	Cell proliferation↓. Synergy	43
	Human cancer cells	HDAC6 activity↓	M-phase arrest. Synergy	44
	A549 cells	FT dissociates from microtubules → HDAC6 activity↓	Cell survival↓. Synergy	45
Lonafarnib + taxane, tamoxifen	Human breast cancer cells	RHEB-F↓, mTOR↓. Synergy	n/d	46
Lonafarnib + cisplatin	A549 and T98G cells	n/d	Anchorage-dependent growth↓. Synergy	47
Lonafarnib + Imatinib	Imatinib-resistant CML cells	Caspase 3↑	Apoptosis. Synergy	48
Lonafarnib + TNF or doxorubicin	Jurkat cells	NFκB activation↓. Expression of NFκB-dependent genes↓	Sensitisation to TNF-induced apoptosis	49
Lonafarnib + MEK1/2 inhibitors	*Hras*-transformed Rat2 cells	p-MAPK↓	Apoptosis. Synergy	50
Lonafarnib or Tipifarnib + cisplatin	A549 cells	p-S6↓, PARP cleavage↑	Cisplatin enhances inhibition of cell survival	22
RPR-115135 + 5-fluorouracil	Human cancer cells expressing wt p53	n/d	Cell proliferation↓. Synergy	51
SCH56582 + CDK inhibitors	Human cancer cells	p-RB↓	Apoptosis	52
Tipifarnib + taxane	Multiple myeloma cells	Caspase 3↑	G2/M arrest and apoptosis. Synergy	53
Tipifarnib + tamoxifen	MCF-7 cells	Cyclin D1↓, $p27^{Kip1}$↑	G1 arrest. Synergy	54
Tipifarnib + TCN	Human cancer cells	p-S6K↓, caspase 3↑. Synergy	Anchorage-dependent and independent growth. Synergy	55

Downward arrows indicate inhibition of activity or reduced expression, upward arrows indicate activation or increased expression.

Cells and cell lines: A549, human lung adenocarcinoma; CaLu-1, human non-small cell lung cancer; C3H 10T½, NIH 3T3, mouse embryonic fibroblasts; COS-7, African green monkey SV40-transformed kidney cells; DLD1, human colorectal adenocarcinoma; HEK293T, human embryonic kidney cells transformed by the Large T antigen from SV40 resulting in inactivation of RB; HeLa, human cervical cancer; HUVECs, human umbilical vein endothelial cells; K562, human chronic myeloid leukaemia; HFF, normal human foreskin fibroblasts; MCF-7, MDA-MB-231, MDA-MB-468, human breast cancer; MiaPaCa2, Panc-1, human pancreatic cancer; OVCAR3, human ovarian carcinoma; PTX10, human ovarian cancer cell line resistant to paclitaxel; Rat-1, REF, rat embryonic fibroblasts; ST88-14, malignant Schwannoma; T98G, human glioblastoma; U2OS, human osteosarcoma

CLL, chronic lymphocytic leukaemia; HNSCC, head and neck squamous cell carcinoma; IGFR; insulin-like growth factor receptor; MCL1, myeloid cell leukaemia sequence 1 (BCL2-related); n/d not determined; NSCLC, non-small cell lung cancer; p-, phosphporylated form of a protein; RB, retinoblastoma protein; S6, ribosomal protein S6; S6K, ribosomal protein S6 kinase; TRAIL: TNF-related apoptosis-inducing ligand; VEGF, vascular endothelial growth factor

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