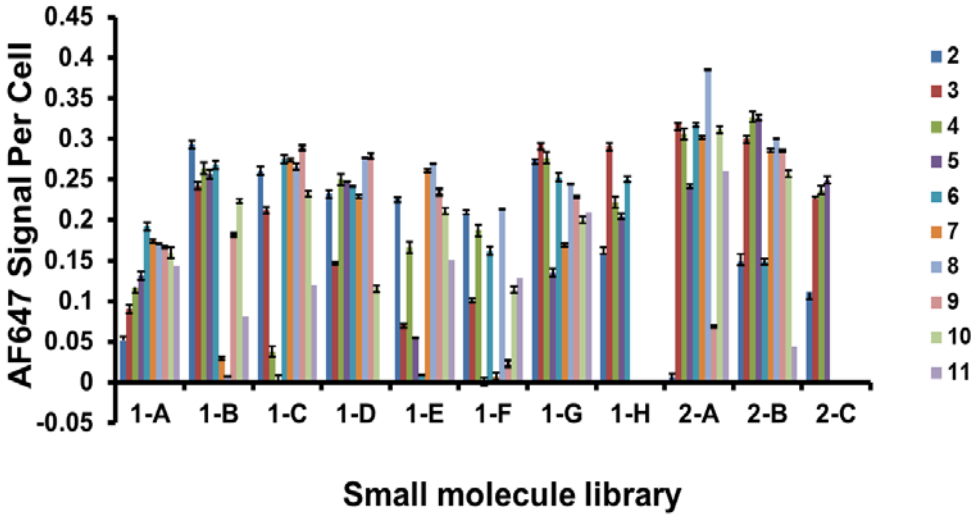
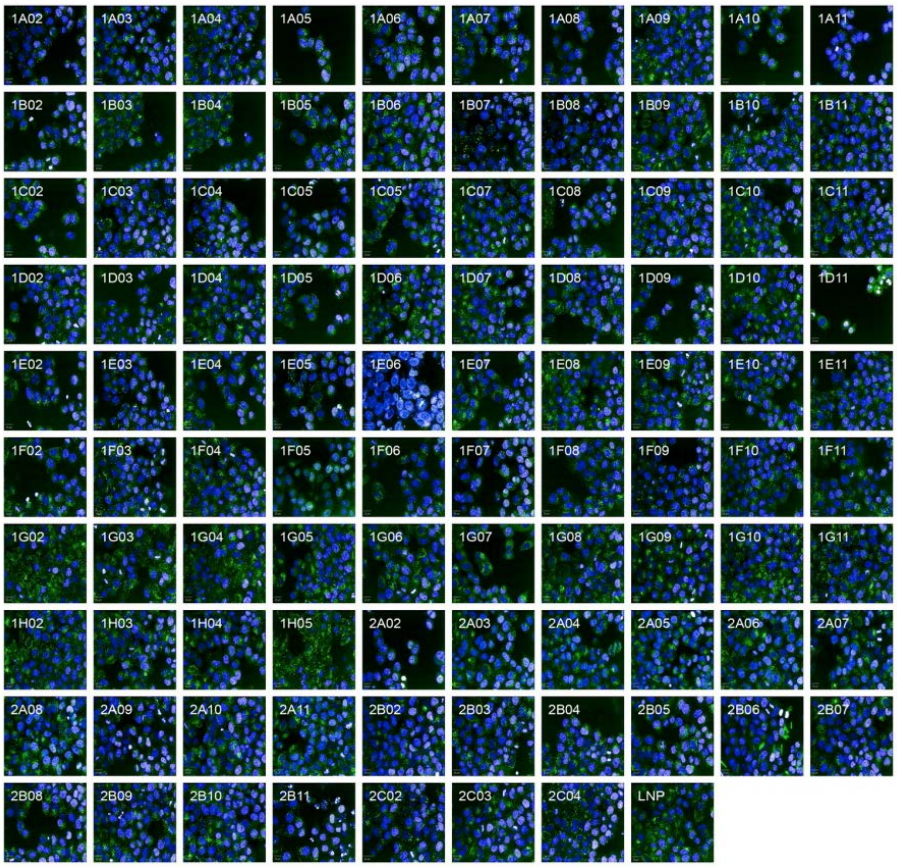
Small Molecules	Mwt	Sample ID	Plate num	INDUCER	CAS Datab	Enzo ID	Stock	Cell signaling
Rapamycin	913.6	1-A02	1	Autophagy inducers	53123-88-9	BML-A275	10mM	mTOR inhibitor
Timosaponin A-III	740.4	1-A03	1	Autophagy inducers	41059-79-4	BML-AP504	10mM	mTOR inhib/ER stress
NVP-BEZ235	469.2	1-A04	1	Autophagy inducers	915019-65-7	BML-AC1502	10mM	Dual PI3K/mTOR Inhibitor
PI-103	348.1	1-A05	1	Autophagy inducers	371935-74-9	ALX-270-460	10mM	Dual PI3K/mTOR inhib
AS605240	257.0	1-A06	1	Autophagy inducers	648450-29-7	ALX-270-462	10mM	PI3Kg inhibitor
Lithium Chloride	42.0	1-A08	1	Autophagy inducers	7447-41-8	BML-AC1503	10mM	IMPase inhibitor/GSK-3b inhib
L-690,330	298.0	1-A07	1	Autophagy inducers	142523-38-4	ALX-270-078	10mM	IMPase inhibitor
Carbamazepine	236.1	1-A09	1	Autophagy inducers	298-46-4	ALX-550-084	10mM	inhibits IP3 via inhbition of inositol synth
Sodium Valproate	166.1	1-A10	1	Autophagy inducers	1069-66-5	ALX-550-304	10mM	inhibits IP3 via inhbition of inositol synth
Verapamil·HCl	490.3	1-A11	1	Autophagy inducers	152-11-4	ALX-550-306	10mM	Ca2+ Blocker
Loperamide·HCl	512.2	1-B02	1	Autophagy inducers	34552-83-5	ALX-550-253	10mM	Ca2+ Blocker
Amiodarone·HCl	681.0	1-B03	1	Autophagy inducers	1951-25-3	BML-AC105	10mM	Ca2+ Blocker/mTORC1 inhib.
Nimodipine	418.2	1-B04	1	Autophagy inducers	66085-59-4	ALX-550-277	10mM	Ca2+ Blocker
Nitrendipine	360.1	1-B05	1	Autophagy inducers	39562-70-4	ALX-550-278	10mM	Ca2+ Blocker
Niguldipine	645.3	1-B06	1	Autophagy inducers	102993-22-6	BML-CA216	10mM	Ca2+ Blocker(T-type)
Penitrem A	637.2	1-B07	1	Autophagy inducers	12627-35-9	BML-KC157	10mM	Ca2+/K+ channel blocker
Ionomycin	678.5	1-B08	1	Autophagy inducers	56092-81-0	ALX-450-006	10mM	Ca2+ ionophore
Rotenone	394.1	1-B09	1	Autophagy inducers	83-79-4	ALX-350-360	10mM	mETC-complex1-inhib
TTFA	222.0	1-B10	1	Autophagy inducers	326-91-0	BML-AC1504	10mM	mETC-complex2-inhib
Fluspirilene	475.2	1-B11	1	Autophagy inducers	1841-19-6	BML-AC116	10mM	Dopamine antagonist
Trifluoperazine·2HCl	479.1	1-C02	1	Autophagy inducers	117-89-5	ALX-550-310	10mM	Dopamine antagonist
Sorafenib tosylate	636.1	1-C03	1	Autophagy inducers	475207-59-1	BML-AC1514	10mM	PDGFR3/FLT3/ER Stress
Niclosamide	326.0	1-C04	1	Autophagy inducers	50-65-7	BML-AC1506	10mM	mTORC1 inhib
Rottlerin	516.2	1-C05	1	Autophagy inducers	82-08-6	ALX-350-075	10mM	mTORC1 inhib
Caffeine	194.1	1-C06	1	Autophagy inducers	58-08-2	ALX-550-322	10mM	mTor pathway inhibition
Metformin·HCl	165.1	1-C07	1	Autophagy inducers	1115-70-4	ALX-270-432	10mM	mTORC1 inhib RAG/GTPase
Clonidine·HCl	265.0	1-C08	1	Autophagy inducers	4205-90-7	ALX-550-087	10mM	I1R agonist
Rilmenidine	296.1	1-C09	1	Autophagy inducers	54187-04-1	BML-AC154	10mM	I1R agonist,
2',5'-Dideoxyadenosine	235.1	1-C10	1	Autophagy inducers	6698-26-6	BML-CN110	10mM	adenylyl cyclase inhib.
Suramin·6Na	1427.9	1-C11	1	Autophagy inducers	129-46-4	ALX-430-022	10mM	Gas inhibitor
Pimozide	461.2	1-D02	1	Autophagy inducers	2062-78-4	BML-AC109	10mM	D1,D2,D3 adrenergic blocker
STF-62247	267.1	1-D03	1	Autophagy inducers	315702-99-9	BML-AP501	10mM	trans golgi network
Spermidine	145.2	1-D04	1	Autophagy inducers	124-20-9	BML-AC1515	10mM	inhibits HATs
FK-866	391.2	1-D05	1	Autophagy inducers	658084-64-1	ALX-270-501	10mM	inhibits NAD
Tamoxifen citrate	563.3	1-D06	1	Autophagy inducers	54965-24-1	ALX-550-095	10mM	inhibits Ceramide
Minoxidil	209.1	1-D07	1	Autophagy inducers	38304-91-5	BML-KC125	10mM	K+ channel opener
Imiquimod	240.1	1-D08	1	Autophagy inducers	99011-02-6	ALX-420-035	10mM	TLR7
Imatinib mesylate	589.2	1-D09	1	Autophagy inducers	220127-57-1	ALX-270-492	10mM	Tyrosine kinase inhib.
AG112	236.1	1-D10	1	Autophagy inducers	144978-82-5	ALX-270-133	10mM	Tyrosine kinase inhib.
SU11652	414.2	1-D11	1	Autophagy inducers	326914-10-7	BML-EI408	10mM	Tyrosine kinase inhib.
SB202190	331.1	1-E02	1	Autophagy inducers	152121-30-7	BML-EI294	10mM	p38 MAPK inhibitor
Brefeldin A	280.2	1-E03	1	Autophagy inducers	20350-15-6	BML-G405	10mM	ER stress
Tunicamycin	702.3	1-E04	1	Autophagy inducers	11089-65-9	BML-CC104	10mM	ER Stress
Thapsigargin	650.3	1-E05	1	Autophagy inducers	67526-95-8	BML-PE180	10mM	ER Stress/SERCA inhib.
Calcimycin	523.3	1-E06	1	Autophagy inducers	52665-69-7	BML-CA100	10mM	ER stress
Capsaicin	305.2	1-E07	1	Autophagy inducers	404-86-4	BML-EI125	10mM	ER stress/p38,ERK inhib
Dihydrocapsaicin	307.2	1-E08	1	Autophagy inducers	19408-84-5	ALX-350-052	10mM	ROS accumulation
Glucosamine HCl	215.1	1-E09	1	Autophagy inducers	66-84-2	BML-AC1513	10mM	mTOR

DTT	154.0	1-E10	1	Autophagy inducers	3483-12-3	ALX-280-001	10mM	ER stress/lysosome degradInhb
Deoxycholate·Na	414.3	1-E11	1	Autophagy inducers	302-95-4	BML-AC1508	10mM	Beclin1- ER stress/DNA damage
HA 14-1	408.0	1-F02	1	Autophagy inducers	65673-63-4	ALX-430-101	10mM	Bcl-2 inhib.
Licochalcone A	338.2	1-F03	1	Autophagy inducers	58749-22-7	ALX-430-124	10mM	Bcl-2/mTOR inhib.
Curcumin	368.1	1-F04	1	Autophagy inducers	458-37-7	ALX-350-028	10mM	Akt/mTOR/S6K path inhib
Plumbagin	188.0	1-F05	1	Autophagy inducers	481-42-5	BML-AP505	10mM	Akt/mTOR inhib.
6-Gingerol	294.2	1-F06	1	Autophagy inducers	23513-14-6	BML-CA422	10mM	ROS induction
Akt Inhibitor X·HCl	380.1	1-F07	1	Autophagy inducers	925681-41-0	BML-AC1509	10mM	Akt Inhibitor
PMSF	174.0	1-F08	1	Autophagy inducers	329-98-6	ALX-270-184	10mM	Protease Inhibitor
MG132	475.3	1-F09	1	Autophagy inducers	133407-82-6	BML-PI102	10mM	Proteasome inhibitor
ALLN	383.3	1-F10	1	Autophagy inducers	110044-82-1	BML-P120	10mM	Proteasome inhibitor
7-Ketocholesterol	400.3	1-F11	1	Autophagy inducers	566-28-9	BML-AC1511	10mM	Mitochondrial stress
17-AAG	585.3	1-G02	1	Autophagy inducers	75747-14-7	BML-EI308	10mM	Hsp90 inhibitor
Geldanamycin	560.3	1-G03	1	Autophagy inducers	30562-34-6	BML-EI280	10mM	Hsp90 inhibitor
C1	242.1	1-G04	1	Autophagy inducers	143413-73-4	BML-AP500	10mM	ROS/non-Beclin1 dependent
Z36	393.2	1-G05	1	Autophagy inducers	N/A	BML-ST200	10mM	Bcl-XL inhibitor
Rockout	194.1	1-G06	1	Autophagy inducers	7272-84-6	ALX-270-429	10mM	Rho kinase Inhibitor
Go6850	412.2	1-G07	1	Autophagy inducers	133052-90-1	BML-EI246	10mM	PKC Inhibitor
2-Deoxyglucose	164.1	1-G08	1	Autophagy inducers	154-17-6	BML-AC1512	10mM	Blocks glycolysis
Etoposide	588.2	1-G09	1	Autophagy inducers	33419-42-0	BML-GR307	10mM	Topoisomerase II Inhibitor
SMER28	263.0	1-G10	1	Autophagy inducers	307538-42-7	BML-EI397	10mM	Increasesautophagosomeclearance
Trehalose	342.1	1-G11	1	Autophagy inducers	99-20-7	BML-AC1507	10mM	Increases Beclin-1 and autophagins
C_2-dihydroceramide	343.3	1-H02	1	Autophagy inducers	13031-64-6	BML-SL101	10mM	Inducesautophagosomeformn
Temozolomide	194.1	1-H03	1	Autophagy inducers	85622-93-1	ALX-420-044	10mM	LocalizesLC3toautophagosomes
Resveratrol	228.1	1-H04	1	Autophagy inducers	501-36-0	BML-FR104	10mM	Inhibits S6 kinase
Staurosporine	466.2	1-H05	1	Autophagy inducers	62996-74-1	BML-EI156	10mM	Apoptosis control
Small Molecules	**Mwt**	**Sample ID**	**Plate num**	**INHIBITOR**	**CAS Datab**	**Enzo ID**	**Stock**	**Cell Signaling**
Bafilomycin A1	606.4	2-A02	2	Autophagy inhibitors	88899-55-2	BML-CM110	1mM	V-ATPase inhib
3-Methyladenine	149.1	2-A03	2	Autophagy inhibitors	5142-23-4	BML-AP502	10mM	PI3K inhib
LY294002	307.1	2-A04	2	Autophagy inhibitors	154447-36-6	BML-ST420	10mM	PI3K inhib
Wortmannin	428.1	2-A05	2	Autophagy inhibitors	19545-26-7	BML-ST415	10mM	PI3K inhib
SP600125	220.1	2-A06	2	Autophagy inhibitors	129-56-6	BML-EI305	10mM	JNK inhib.
Chloroquine	319.2	2-A07	2	Autophagy inhibitors	54-05-7	BML-DL353	10mM	Lysosomes (decreases pH)
Hydroxychloroquine	335.2	2-A08	2	Autophagy inhibitors	118-42-3	BML-AC1500	10mM	Lysosomes (decreases pH)
Norclomipramine·HCl	336.1	2-A09	2	Autophagy inhibitors	303-48-0	BML-AC1501	10mM	Lysosomes (decreases pH)
(±)Bay K8644	356.1	2-A10	2	Autophagy inhibitors	71145-03-4	BML-CA410	10mM	L-type Ca2+ agonist
Forskolin	410.2	2-A11	2	Autophagy inhibitors	66428-89-5	BML-CN100	10mM	adenylyl cyclase activator
Dibutyryl cAMP·Na	491.1	2-B02	2	Autophagy inhibitors	16980-89-5	BML-CN125	10mM	cAMP agonist
Rolipram	275.2	2-B03	2	Autophagy inhibitors	61413-54-5	BML-PD177	10mM	PDE4 Inhibitor(decrease cAMP)
8-CPT-cAMP·Na	493.0	2-B04	2	Autophagy inhibitors	93882-12-3	BML-CN130	10mM	Epac activator
EHNA·HCl	313.2	2-B05	2	Autophagy inhibitors	51350-19-7	BML-PD129	10mM	Dynein inhibitor
Tolazamide	311.1	2-B07	2	Autophagy inhibitors	1156-19-0	ALX-550-216	10mM	ATP-K+ channel antagonist
Quinine HCl·2H_2O	396.2	2-B08	2	Autophagy inhibitors	6119-47-7	BML-AC1516	10mM	ATP-K+ channel antagonist
AICAR	258.1	2-B09	2	Autophagy inhibitors	2627-69-2	BML-EI330	10mM	Class III PI3K/Beclin1 binding
PD-98059	267.1	2-B10	2	Autophagy inhibitors	167869-21-8	BML-EI360	10mM	ERK pathway activator
Anisomycin	265.1	2-B11	2	Autophagy inhibitors	22862-76-6	BML-ST102	10mM	p38 MAPK activator
Cycloheximide	281.2	2-C02	2	Autophagy inhibitors	66-81-9	ALX-380-269	10mM	protein synthesis(CMA)
Pifithrin-μ	181.0	2-C03	2	Autophagy inhibitors	64984-31-2	BML-AP503	10mM	HSP70 inhibitor
Nocodazole	301.1	2-C04	2	Autophagy inhibitors	31430-18-9	BML-T101	10mM	Inhibits autophagosome/lysosome fusion; Microtubule depolymerization
LNP Alone		2-C05						



Supplemental Information-Excel : Quantitative analysis of siRNA uptake in presence of small molecules: HeLa cells were exposed to LNPs (siAF647) in presence of small molecules for 3 hrs, cells were washed and uptake was quantified with the use of Acapella software. Experiments were conducted in triplicate with error measured as Standard error Mean (S.E.M)



Supplemental Information-Excel : A represenatative image from different treatment groups (20 fields) are shown for the treatment groups mentioned above.