In vitro and *in vivo* rationale for the triple combination of panobinostat (LBH589) and dexamethasone with either bortezomib (PBD) or lenalidomide (PLD) in multiple myeloma

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Supplementary Table 1. Genes specifically deregulated by the triple combinations of PBD. MM1S cells were treated with panobinostat (7 nM), dexamethasone (0.9 μM) and bortezomib (3 nM) as single agents for 48 hours and in triple combinations for 24 hour, in order to obtain 20–25% apoptosis. After this period, cells were collected and changes in GEP were analyzed. A summary of the most relevant genes specifically deregulated by the triple combination, grouped by categories is shown.

Supp. table 1 Genes exclusively deregulated by panobinostat + dexamethasone + bortezomib

Probe set	Gene Symbol	MM1S FC	Description
Apoptosis			
201466_s_at	**JUN**	8.14	jun oncogene
204121_at	**GADD45G**	7.88	growth arrest and DNA-damage-inducible, gamma
209305_s_at	**GADD45B**	5.54	growth arrest and DNA-damage-inducible, beta
225606_at	**BIM**	3.46	BCL2-like 11 (apoptosis facilitator)
204859_s_at	**APAF1**	3.16	apoptotic peptidase activating factor 1
213373_s_at	**CASP8**	2.73	caspase 8, apoptosis-related cysteine peptidase
205467_at	**CASP10**	2.62	caspase 10, apoptosis-related cysteine peptidase
1729_at	**TRADD**	2.36	TNFRSF1A-associated via death domain
208905_at	**CYCS**	-2.54	cytochrome c, somatic
227143_s_at	**BID**	-2.76	BH3 interacting domain death agonist
204824_at	**ENDOG**	-3.55	endonuclease G
219366_at	**AVEN**	-5.14	apoptosis, caspase activation inhibitor
Cell cycle			
219534_x_at	**CDKN1C**	7.89	cyclin-dependent kinase inhibitor 1C (p57, Kip2)
213523_at	**CCNE1**	-2.34	cyclin E1
200951_s_at	**CCND2**	-2.63	cyclin D2
213226_at	**CCNA2**	-2.76	cyclin A2
228361_at	**E2F2**	-3.03	E2F transcription factor 2
1555772_a_at	**CDC25A**	-3.87	cell division cycle 25 homolog A (S. pombe)
203967_at	**CDC6**	-4.23	cell division cycle 6 homolog (S. cerevisiae)
204947_at	**E2F1**	-4.92	E2F transcription factor 1
Chemokine			
205098_at	**CCR1**	-2.79	chemokine (C-C motif) receptor 1
207681_at	**CXCR3**	-33.2	chemokine (C-X-C motif) receptor 3

Supplementary Table 2. Genes specifically deregulated by the triple combinations of PLD. MM1S cells were treated with panobinostat (7 nM), dexamethasone (0.9 μM) and lenalidomide (1 μM) as single agents for 48 hours and in triple combinations for 26 hours, in order to obtain 20–25% apoptosis. After this period, cells were collected and changes in GEP were analyzed. A summary of the most relevant genes specifically deregulated by the triple combination, grouped by categories, is shown.

Supp. table 2 Genes exclusively deregulated by panobinostat + dexamethasone + lenalidomide

Probe set	Gene Symbol	MM1S FC	Description
Apoptosis			
203140_at	**BCL6**	24.02	B-cell CLL/lymphoma 6 (zinc finger protein 51)
213596_at	**CASP4**	4.76	caspase 4, apoptosis-related cysteine peptidase
1552703_s_at	**CASP1**	3.54	caspase 1, apoptosis-related cysteine peptidase
204859_s_at	**APAF1**	3.01	apoptotic peptidase activating factor 1
1729_at	**TRADD**	2.91	TNFRSF1A-associated via death domain
201473_at	**JUNB**	2.28	jun B proto-oncogene
220643_s_at	**FAIM**	-2.66	Fas apoptotic inhibitory molecule
201746_at	**TP53**	-2.87	tumor protein p53 (Li-Fraumeni syndrome)
210792_x_at	**SIVA1**	-2.91	SIVA1, apoptosis-inducing factor
204824_at	**ENDOG**	-3.04	endonuclease G
204493_at	**BID**	-3.18	BH3 interacting domain death agonist
208905_at	**CYCS**	-3.30	cytochrome c, somatic
219366_at	**AVEN**	-3.40	apoptosis, caspase activation inhibitor
Cell cycle			
216894_x_at	**CDKN1C**	3.17	cyclin-dependent kinase inhibitor 1C (p57, Kip2)
222156_x_at	**CCPG1**	2.86	cell cycle progression 1
217968_at	**CCNB1IP1**	2.65	cyclin B1 interacting protein 1
221427_s_at	**CCNL2**	2.65	cyclin L2
213523_at	**CCNE1**	-2.58	cyclin E1
202246_s_at	**CDK4**	-2.95	cyclin-dependent kinase 4
200951_s_at	**CCND2**	-4.29	cyclin D2
228361_at	**E2F2**	-4.49	E2F transcription factor 2
204126_s_at	**CDC45L**	-6.87	CDC45 cell division cycle 45-like (S. cerevisiae)
Chemokine			
204103_at	**CCL4**	3.84	chemokine (C-C motif) ligand 4
206978_at	**CCR2**	3.33	chemokine (C-C motif) receptor 2
207681_at	**CXCR3**	-7.06	chemokine (C-X-C motif) receptor 3